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Report No: ICR00003726

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-H2900-SL IDA-H6970-SL (P096105))

GRANT H-2900-SL

IN THE AMOUNT OF SDR 19.9 MILLION
(US$ 30 MILLION EQUIVALENT)

GRANT H-6970-SL

IN THE AMOUNT OF SDR 12.7 MILLION
(US$20 MILLION EQUIVALENT)

TO THE

REPUBLIC OF SIERRA LEONE

FOR A

RURAL AND PRIVATE SECTOR DEVELOPMENT PROJECT

May 16, 2016

Agriculture Global Practice
Country Department AFCW1
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November, 2015)
Currency Unit =Sierra Leonean Leones
Le 4,487.93 = US$ 1
US$ 1.38 = SDR 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

BIA	Beneficiary Impact Assessment
CAS	Country Assistance Strategy
DIC	District Implementation Committee
DMIS	Domestic Market Information System
DTIS	Diagnostic Trade Integration Study
EC	European Commission
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
ESW	Economic and Sector Work
EVD	Ebola Virus Disease
FAO	Food & Agriculture Organisation of the United Nations
FBO	Farmer Based Organizations
GOSL	Government of Sierra Leone
IFAD	International Fund for Agricultural Development
ISR	Implementation Status and Results Report
JCSP	Joint Country Strategy Paper
JICA	Japan International Cooperation Agency
LC	Local Council
MAFFS	Ministry of Agriculture, Forestry and Food Security
MoLGRD	Ministry of Local Government and Rural Development
MoTI	Ministry of Trade and Industry
NAMIS	National Agricultural Management Information System
NERICA	New Rice for Africa
NFF-SL	National Farmers Federation of Sierra Leone
NSADP	National Sustainable Agricultural Development Programme
NSC	National Steering Committee
PCU	Project Coordination Unit
PDO	Project Development Objective
PIM	Project Implementation Manual
PSU	Project Support Unit
GIM	Grants Implementation Manual
PEMSD	Policy, Evaluation, Monitoring and Statistics Division
PRSP	Poverty Reduction Strategy Paper
PSIA	Poverty and Social Impact Assessment
PTC	Project Technical Committee
RIS	Rural Information System
RPSDP	Rural and Private Sector Development Project

SLeSCA	Sierra Leone Seed Certification Agency
SLIEPA	Sierra Leone Investment and Export Promotion Agency
SLRA	Sierra Leone Roads Authority
TIC	Trade Information Centre
WARD	Western Area Rural District

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SIERRA LEONE
Rural and Private Sector Development Project (RPSDP)

CONTENTS

A. Basic Information

Country:	Sierra Leone	Project Name:	Rural and Private Sector Development
Project ID:	P096105	L/C/TF Number(s):	IDA-H2900,IDA-H6970
ICR Date:	05/22/2016	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVERNMENT OF SIERRA LEONE
Original Total Commitment:	XDR 19.90M	Disbursed Amount:	XDR 32.59M
Revised Amount:	XDR 32.60M		
Environmental Category: B			
Implementing Agencies: Ministry of Food and Agriculture/Ministry of Trade and Industry			
Cofinanciers and Other External Partners:			

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	04/13/2006	Effectiveness:	06/30/2008	06/30/2008
Appraisal:	03/22/2007	Restructuring(s):		06/26/2009 08/05/2009
Approval:	05/22/2007	Mid-term Review:		07/29/2010
		Closing:	11/14/2012	11/14/2015

C. Ratings Summary

C.1 Performance Rating by ICR	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Substantial

Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry:	Moderately Unsatisfactory	Government:	Moderately Unsatisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Satisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Agricultural extension and research	5	5
Agro-industry, marketing, and trade	38	38
General agriculture, fishing and forestry sector	15	15
General industry and trade sector	25	25
General public administration sector	17	17

Theme Code (as % of total Bank financing)		
Export development and competitiveness	22	22
Micro, Small and Medium Enterprise support	23	18
Rural markets	22	20
Rural policies and institutions	11	10
Rural services and infrastructure	22	30

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Makhtar Diop	Hartwig Schafer
Country Director:	Henry G. R. Kerali	Mats Karlsson
Practice Manager/Manager:	Simeon Kacou Ehui	Mary A. Barton-Dock
Project Team Leader:	Hardwick Tchale	Gayatri Acharya
ICR Team Leader:	Abimbola Adubi	
ICR Primary Author:	Abimbola Adubi	

(F) Result Framework

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values from 2011 Additional Financing	Actual Value Achieved at Completion or Target Years
Indicator 1	50% of target beneficiaries for the selected value chain increase their production by at least 20% by the end of the project			
Value (Tons/ha)	**Cassava :** 13mt/ha **Rice :** 0.86mt/ha Cocoa : 0.42mt/ha	Cassava : 15.6mt/ha Rice : 1.03mt/ha Cocoa : 0.5mt/ha	Cassava : 12mt/ha Rice **:** 0.88mt/ha	Cassava: 12.34mt/ha Rice : 2.05mt/ha Cocoa : 0.98mt/ha

Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	The original PAD indicator expected a 20% increase which formed the target for 2012. The PAD indicator for farm-level value addition was dropped in September 2009 and replaced with the above indicator; target was reduced with June 2011 AF operation. The split rating approach is adopted to assess the PDO achievement (see section 3.2). Achievement pre-AF: Beneficiaries expected: 150,000; achieved: 17,491 (11.6%) Productivity achievement (% of target): Cassava: 89.7%; Rice: 83.4%; Cocoa: 150% (Given the low level of beneficiary, this is rated MU – rating 3--- see txt on PDO achievement and the Annex 10 on split rating) Achievement post-AF: Beneficiaries expected: 25,000; achieved: 56,000 (224%) Productivity achievement (% of target): Cassava: 103%; Rice: 233%; Cocoa: 196% (This post –AF achievement is rated S-rating 5— because of the high percentage scores on productivity and the additional coverage of beneficiaries that is doubled the target)			
Indicator 2	50% of target beneficiaries for the selected value chain increase their sales by at least 10% by the end of the project.			
Value (Price/Kg)	**Cassava :** Le 550/kg; **Rice** : Le 1320/kg; **Cocoa** : --- Le 3750/kg	**Cassava :** Le 864/kg **Rice :** Le 2072/kg; **Cocoa :** Le 5888/kg	**Cassava :** Le605/kg **Rice** : Le 1452/kg **Cocoa :** Le 4125/kg	Cassava : Le772.44/kg Rice : Le 2,176.35/kg Cocoa : Le 8,281.44/kg
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	The original PAD indicator for sales increase was dropped in July 2009 and replaced with this indicator (real price increase of 10%. Target was therefore deflated by inflation); targets reduced with June 2011 AF operation (real prices replaced with targeted nominal prices). Achievement pre-AF: Beneficiaries expected: 150,000; achieved: 16,000 (10.6%) Sale price achievement (% of target): Cassava: 58%; Rice: 58%; Cocoa: 170% (This achievement was made by only 10.6% of the expected beneficiaries. It is therefore rated as MU - 3) Achievement post-AF: Beneficiaries expected: 25,000; achieved: 56,000 (224%) Sale price achievement (% of target): Cassava: 128%; Rice: 150% (This target was fully achieved by more than double the expected number of participants. It is rated S – rating of 5) .			
Indicator 3	**Beneficiaries: Number of project beneficiaries, direct/indirect**			
Value (Number)	0	Direct : 300,000;	Direct : 50,000 Indirect : 200,000	56,000 **213,000**

Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	The PAD did not have any target but the Economic Analysis indicated a target of 300,000 producer farmers. At AF, a target set for direct beneficiaries was (50,000) and indirect beneficiaries (200,000) <u>Achievement pre-AF:</u> 17,491 out of 300,000 (5.83% of target) (rated U – rating of 2) <u>Achievement post-AF:</u> 56,000 out of 50,000 (112% of target) (rated S ---rating of 5)			
Indicator 4	**Beneficiaries**: of which female (40% beneficiaries)			
Value (Number)	0	Direct : 20,000	Direct Female : 20,000 Indirect Female : 80,000	Direct Female:26,320 Indirect Female: 92,655
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	The PAD did not have any target for female beneficiaries. At AF, a 40% target was set for female beneficiaries. <u>Achievement pre-AF:</u> NA <u>Achievement post-AF:</u> Direct female beneficiaries: 132% of target; Indirect female beneficiaries: 116% of target (rated S)			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values from 2011 Additional Financing	Actual Value Achieved at Completion or Target Years
	Intermediate Result : Component 1 : Domestic Market improvement			
Indicator 1	Time taken to transport goods to the nearest market reduced by 20% after the rehabilitation of feeder roads			
Value (Time/km)	1hr/km	NA	**10 mins/km**	27 mins/km
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	• The Indicator was a measurement of reduction in cost of transport in the original PAD but was revised at restructuring in 2009 in order to be measurable and attributable to project. It has no baseline value in the PAD but 2011 sets the baseline at 1hr/km. Achievement Pre-AF; Cannot be assessed appreciably, but achievement was 1hr/km • Achievement Post- AF- target not fully achieved. • The time taken to transport goods to the market was estimated by adding up waiting time and travel time. Results from the BIA (2014) indicate, (1) 53.6% reduction in the time it takes to transport goods from communities to the market by vehicle, and (2) 72.7% reduction in travel time by motor cycles or 'Okadas'.			

Indicator 2	Real farm gate prices increase by at least 10% for the selected value chains of the targeted beneficiaries.			
Value (Price/Kg)	Cassava : Le550/Kg Rice : Le 1320/Kg; Cocoa : Le 3750/Kg	Cassava: Le 864/kg Rice: Le 2072/kg Cocoa: Le 5888/kg	Cassava: Le 605/kg Rice: Le 1452/kg Cocoa: Le 4125/kg	Cassava: Le 772.44/kg Rice: Le 2,176.35/kg Cocoa: Le 8,281.44/kg
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	• The PAD and the PP of 2011 gave different baseline data for this indicator. The 2011 figures are assumed to be more accurate and close to reality for assessment. The indicator was in real prices abut was changed to nominal prices in 2011. Therefore, factoring the 47% inflation during the period, and the target of 10% increase, the target for 2012 is as indicated above. • Achievement Pre-AF--(% of target): Cassava: 58%; Rice: 58%; Cocoa: 169% ---Partially achieved. • Achievement Post AF---- (% of target): Cassava: 128%; Rice: 150%; Cocoa: 200% ----------Target fully achieved.			
Indicator 3	Producers confirm firm supply and contractual agreements with marketers/processors for selected value chains of targeted beneficiaries.			
Value (Number of FBOs)	0% of target FBOs	100%	100%	58
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Achievement Pre-AF—only 71 out of 75 targeted FBOs had confirmed contractual arrangements. This is 95% achievement. Achievement Post AF- Only 58 out of 184 FBOs had contractual supply agreements. This represents 31.5%. Target was not achieved.			
Indicator 4	No of beneficiary communities having access to market infrastructure.			
Value (Number)	0	20	20	220
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	The indicator was revised in 2011 to capture project outcome. It was originally based on the no of markets constructed as at 2009. Achievement Pre-AF- Only 3 communities have access to market infrastructure constructed out of the total 75 communities.			

	Achievement Post-AF- The beneficiary communities of the different investments/support of the project is estimated at 184. Since project inception, 21 out of 22 markets have been constructed benefiting 220 communities. Target fully achieved.			
Indicator 5	At least 400 sub-projects financed and implemented.			
Value (Number)	0	1000	**1000**	275
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target not achieved. Only 275 sub-projects were achieved at project closing. This is 27.5% achievement.			
Indicator 6	Cultivated area under the selected value chain increases by 10% at the end of the project period for targeted beneficiaries			
Value (Hectares)	Cassava : 0.5ha/farmer; Rice 1 ha/farmer	Cassava :0.55 ha/farmer Rice:1.1 ha/farmer	Cassava:.55ha/farmer Rice: 1.1ha/farmer	Cassava : 1ha/farmer; Rice : 1.5 ha/farmer
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved.			
	Intermediate Result : Component 2 : Agricultural Export Promotion			
Indicator 7	Volume of exports of selected value chains commodities increased by 10% for targeted beneficiaries			
Value (tons)	Cocoa : 50000 tons	Cocoa:500 tons	Cocoa : 550 tons	728.3 tons
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved. The PAD data gave the figure for the country and was not specific but at AF in 2011, the baseline data was made specific to project beneficiaries. At project closing, the average annual export of cocoa by beneficiaries has reached 723.8 mt. Achievement is 132%.			
	Intermediate Result : Component 3: Support to Farmer-Based Organizations and Technology Improvement			
Indicator 8	FBOs run and managed effectively for their members.			

Value (Number of meetings)	None	Once a month	Once a month	Once a month
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved. However, regular meetings could not be held during the Ebola epidemic due to the state of emergency which was declared by the Government on July 30, 2014 to address the Ebola Virus Disease epidemic. Meetings were held regularly before the EVD.			
Indicator 9	Farmers maintain records of membership, dues , production levels and assets			
Value (Percent of FBOs keeping meetings)	0% maintain records	100% maintain records;	100% maintain records	100% maintain records.
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved. All target FBOs maintain records of due, production levels and assets			
Indicator 10	Improved planting materials and seeds made available to 50% of targeted beneficiaries for selected chains			
Value (Number of farmers who receive improved materials)	None	100% receive improved planting materials	50% receive improved planting materials	70% of the FBOs received improved planting materials.
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved. 7.6 Mt of the rice seeds distributed to the 21 FBOs of the three rice Cooperatives to cultivate an estimated area of 126Ha; a total of 1,720,000 improved cocoa seedlings were provided to the cocoa cooperatives established by the project and a total of			
Indicator 11	**Development of seed, fertilizer and pesticide laws and regulations**			
Value (Number of laws completed)	None		3 Bills completed (Phytosanitary and Pest Control)	3 laws completed
Date Achieved	09/15/2009		11/14/2015	11/14/2015

Comments (including % achievement)	Target partly achieved as some of these were supported by WAAPP			
Indicator 12	**Harmonization of policies and regulations governing the formation and regularization of farmer base groups**			
Value (Policy completed	None	NA		One Policy completed
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target partly achieved as some of the activities were not fully completed. Draft Food Safety Bill and Policy developed; enactment pending. Supported the review of NaFFSL Constitution; Facilitated the restructuring of the CCMU into Produce Monitoring Board Act; Standards Bureau – development of 66 quality standards.			
Indicator 13	**Beneficiary scorecards report satisfaction with project**			
Value (% of beneficiary satisfaction with Projects)	0%	80% report satisfaction with the project	80% report satisfaction with the project	99% report satisfaction with the project
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved. The satisfaction survey was not carried out pre-AF.			
Indicator 14	Community awareness of matching grants			
Value (Number of weekly radio sessions)	None	312 awareness radio programmes	1660 awareness radio programmes	2184 awareness radio programmes
Date Achieved	09/15/2009	11/14/2012	11/14/2015	11/14/2015
Comments (including % achievement)	Target fully achieved. Indicator was original based on awareness survey and targets 80% awareness by respondents. It was revised in 2011 to be measured by the number of awareness radio programmes and the frequency. This gave a target of 2184 weekly awareness programmes to be conducted before project closure. The target is 76 percent achieved. Values calculated on the basis of bi-weekly radio slots with weekly repeat slots in each of the 13 Districts for the year. This makes a target of 2184 weekly radio slots by project closure			

G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	12/02/2007	Unsatisfactory	Unsatisfactory	0.00
2	05/31/2008	Unsatisfactory	Unsatisfactory	0.00
3	12/01/2008	Unsatisfactory	Moderately Unsatisfactory	0.30
4	05/29/2009	Unsatisfactory	Moderately Unsatisfactory	3.72
5	06/30/2009	Unsatisfactory	Moderately Unsatisfactory	3.72
6	12/09/2009	Unsatisfactory	Moderately Unsatisfactory	4.73
7	05/07/2010	Moderately Satisfactory	Satisfactory	8.41
8	12/05/2010	Satisfactory	Satisfactory	15.79
9	05/24/2011	Satisfactory	Satisfactory	18.58
10	12/27/2011	Satisfactory	Satisfactory	23.28
11	06/26/2012	Satisfactory	Satisfactory	27.11
12	10/02/2012	Satisfactory	Satisfactory	28.25
13	04/22/2013	Moderately Satisfactory	Moderately Satisfactory	31.55
14	11/11/2013	Satisfactory	Satisfactory	33.95
15	07/02/2014	Satisfactory	Satisfactory	42.22
16	12/08/2014	Satisfactory	Satisfactory	47.56
17	06/16/2015	Satisfactory	Moderately Satisfactory	49.13

H. Restructuring (if any)

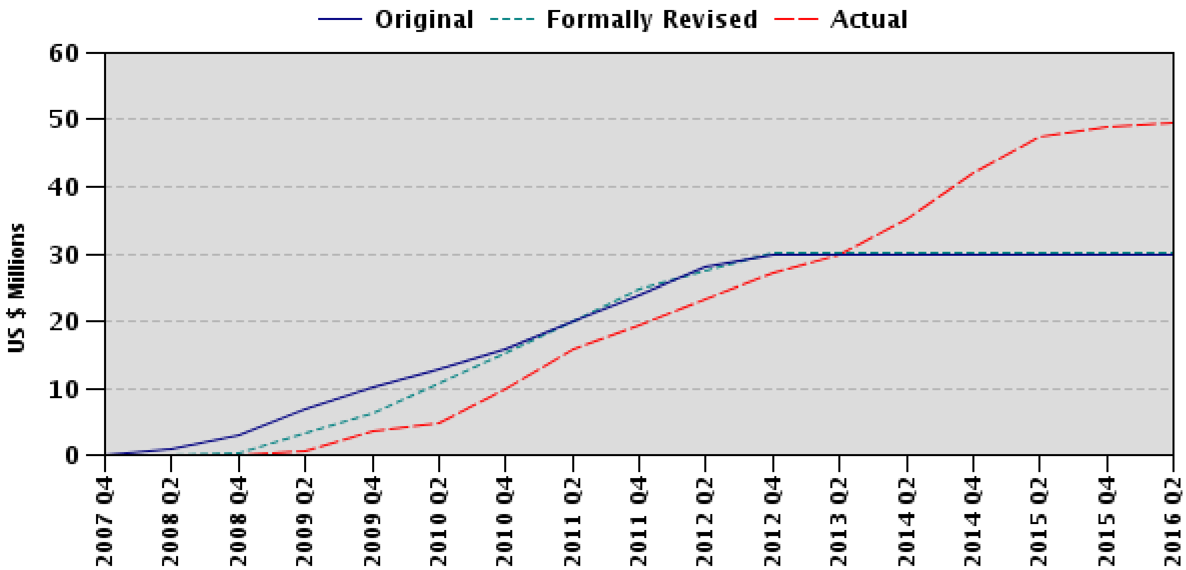
Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
06/26/2009	Y	U	MU	3.72	The restructuring was carried out to effect: (i) changes in

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					the project implementation arrangements; (ii)reallocation of Grant proceeds to cater for increased support towards rehabilitation of feeder roads; (iii) modifications to theProject Development Objective (PDO) for clarity and greater consistency between the Project Appraisal Document (PAD) andFinancing Agreement and; (iv) revisions to the project results framework and indicators.
08/05/2009	N	U	MU	3.72	Cost reallocation and modification of indicators

If PDO and/or Key Outcome Targets were formally revised (approved by the original approving body) enter ratings below:

	Outcome Ratings
Against Original PDO/Targets	Moderately Satisfactory
Against Formally Revised PDO/Targets	Moderately Satisfactory
Overall (weighted) rating	Moderately Satisfactory

I. Disbursement Profile



1. Project Context, Development Objectives and Design
1.1 Context at Appraisal

Country Background

1. Following a period of violent civil conflict from 1991 to 2001, the country of Sierra Leone rebuilt itself by quickly re-establishing basic services, boosting food production, and maintaining a level of political stability which has been conducive to building trust within the population and the economy. While the country's rich natural resources and donor support have aided this process, more rapid growth in economic opportunities was considered critical for the country to be able to maintain and improve its performance. In 2007, an estimated 82 percent of Sierra Leone's population of 5.7 million lived below the poverty line of US$1/day, and over 50 percent lived in absolute poverty, many of them displaced and many without adequate education. GDP was US1.4 billion in 2007-2008, with an estimated 7 percent real growth rate. GDP per capita was US$240. Poverty was most acute in rural areas, where 89 percent of the population was classified as poor, 65 percent of whom lived in absolute poverty. The poverty rate was the highest in the rice growing northern areas, at 85 percent, and between 78 and 80 percent in other regions. Food insecurity has been a fundamental effect of poverty in Sierra Leone, and is the result of factors such as low levels of domestic production, poor distribution and limited availability, and a lack of purchasing power among many households. Poor infrastructure and a variety of policy and institutional failures limited linkages between food producing areas and markets, leading to low returns for food producers and high post-harvest losses.

2. Sierra Leone's PRSP 2006-09 committed the Government to addressing the causes of conflict and poverty by focusing on three strategic objectives: (i) good governance, security and peace; (ii) pro-poor, sustainable economic growth for food security and jobs creation; and (iii) human resource development. In October 2005, the Ministry of Agriculture, Forestry and Food Security, in collaboration with the Ministry of Fisheries and Marine Resources, issued a planning document titled "Operation Feed the Nation: Contextualizing Sierra Leone-PRSP towards Food Security and Poverty Alleviation." In it, the Government laid out a plan to promote food security by rehabilitating the agriculture sector and by improving linkages between sectors to greatly expand access to markets and ensure food availability in all areas.

Sector Background

3. Agriculture is the preeminent sector of the economy of Sierra Leone, followed by mining. At appraisal, it provided employment to 75 percent of the population, and accounted for 50 percent of GDP and 14 percent of exports. The agricultural growth rate was estimated at between 3.5 and 4.0 percent annually. The role of agriculture-led growth in a country that relies to this extent on natural resources for revenue was considered central to maintaining stability and promoting a more equitable and sustainable growth strategy.

4. Despite the good prospects and potential envisaged for agriculture, the sector was facing numerous challenges. Low on-farm productivity, with yields averaging around 1.0 ton/ha for rice and maize, and less than 5.0 tons for cassava, and post-harvest losses averaging around 40 percent were prominent among these. More than 450,000 farm families cultivated around 600,000 ha annually with an average farm size of about 1.6 ha. Most farming was small-scale subsistence bush-fallow cultivation, with farm sizes typically ranging from 0.5 to 2.0 ha of cultivated land under food crops. Inadequate access to markets depressed farm gate prices and constituted serious disincentives to increasing productivity and production. Farmers faced severe constraints in their

access to inputs, equipment, technology, credit, and information. Access to inputs and to improved technologies were identified in the 2006-09 PRSP as critical constraints to on-farm productivity. More recently, a Comprehensive Food Security and Vulnerability Assessment estimated that only 10 percent of farmers plant improved varieties and that just four percent apply inorganic fertilizers (WFP/MAFFS/FAO, 2015).[1] The forestry, livestock, and fisheries subsectors were also marked by inefficiencies that had a direct bearing on their respective performance. Fallow farmlands combined with slash-and-burn agriculture contributed to deforestation, soil exhaustion, and decreased yields. An estimated 90 percent of the country's original forests had been destroyed by the prevailing slash and burn cultivation practices. Addressing the former constraints will improve production and productivity, and the latter will lead to better producer incentives for producing for higher household incomes, improved food availability in all parts of the country, and enhanced exports of some commodities. Progress in both these areas is required.

5. Despite these challenges, post-conflict economic performance showed an impressive recovery of agricultural outputs with increases of 27 percent in 2003 and 17 percent in 2004. Food production rebounded to some extent but remained well below its potential. The country has 1.43 million hectares of arable land of which only about 0.69 million hectares, or 48 percent were cultivated. Capitalizing on this untapped potential has been an emphasis of government strategy, with a number of initiatives undertaken with donor support to increase agricultural production. In 2002, the Government prepared an *Interim Statement of Policy Intent for the Agricultural Sector,* presenting its medium-term objectives, including ensuring food security at the national and household levels by 2007. Agriculture was to be the country's main engine of balanced and equitable growth. The Government's *Medium-term (2003-07) Strategic Plan for Agriculture*, framed the transition from emergency assistance to a longer-term development strategy.[2] The Plan focused on (i) providing agricultural producers with financially attractive production opportunities by linking producers to markets; (ii) establishing a supportive policy and institutional environment for private sector development, for agricultural production, and for activities along the value chain; (iii) empowering farmers to mobilize resources and services; and (iv) improving the delivery of the goods and services, both of a public and private nature. Production could be increased both through improved crop productivity and through environmentally sustainable expansion of the area cultivated. Strengthening backward and forward linkages through value chains, including input markets, was considered a key to addressing poverty and promoting accelerated economic growth.

Rationale for Bank Assistance

6. Addressing food security through the rehabilitation of the country's agriculture sector emerged as a clear priority of the GOSL, epitomized by the President's declaration that no Sierra Leonean should go to bed hungry by 2007. A Bank supported ESW titled *Revitalizing Rural Development and Agriculture* emphasized the development of agricultural markets, a dynamic agribusiness sector, and support for infrastructure. Another study, titled *Youth Employment,* also identified opportunities for support to the rural economy, noting a trend towards urbanization among younger adults, and younger males in particular. While the majority (66 percent) of the

[1] Ministry of Agriculture, Forestry and Food Security (MAFFS), World Food Program (WFP) and Food and Agriculture Organization (FAO): The State of Food Insecurity in Sierra Leone 2015. Comprehensive Food Security and Vulnerability Analysis (CFSVA). Draft Report.

[2] The Government has been developing a new sector program to succeed the SCP in guiding sector investment between 2016 – 2020). This sector development program also promotes the commercialization of smallholder agriculture.

population lived in rural areas, younger adults were more urbanized than children and adults: 53 percent of 20-24 year olds, and 58 percent of 25-29 year olds were living in urban areas. Among 20-34 years old in rural areas, only 42 percent are male, partly owing to higher levels of migration to urban areas among young men, and especially to the Freetown area. The composition of the younger population and workforce in rural areas was becoming predominantly female, particularly in the area of marketing agricultural products. This participation of women in marketing and small-scale agro-processing activities provided one of the rationales for the project, both through direct targeting of support to farmer based organizations, traders and small scale agro-processors, and indirectly through improvements in marketing infrastructure and other elements of value chains.

7. The *Diagnostic Trade Integration Study* (DTIS) provided additional impetus for the project, noting the constraints and opportunities facing agricultural commodities that could play a role in the proposed operation. Inputs to the financial sector through the Administrative Barriers Project and the Financial Sector Assessment Program also informed the project design. Inefficient pre-shipment inspections, high port and handling charges, weak customs administration and poor transport regulations were identified as constraints to exports. Many of these were already being addressed by ongoing investments and technical assistance. The DTIS noted that in the longer run, the growth of domestic demand for agricultural products was unlikely to exceed 3-4 percent per annum. The study therefore foresaw that growth in the sector would require strong export markets.

8. The findings of more recent World Bank studies have further supported the design of the Rural and Private Sector Development Project and its emphasis on enhanced market access for small holder farmers as well. Among these were the Basic Public Expenditure Diagnostic Review which advocated for enhanced quality of spending in a focused and efficient manner within the framework of the National Sustainable Agricultural Development Programme (NSADP).[3] The 2014 Poverty Assessment recommended an expansion of opportunities in rural agriculture for job creation, and the Agriculture Sector Review carried out specifically towards promoting smallholder commercialization and agribusiness development.[4]

9. Current levels of technology are insufficient for the country to regain its comparative advantage in agricultural exports but as noted in both the Agriculture Sector Review and the DTIS, with rehabilitation, Sierra Leone’s comparative advantage in agricultural exports can increase substantially.

Contribution to Higher Level Objectives

10. The project was consistent with the second pillar of the Sierra Leone PRSP which was oriented towards pro-poor sustainable economic growth for food security, as well as with strategic priority 2 of the 2006-09 CAS, on sustained growth in agriculture with food security and job creation. The project also aligned with the Government’s “Sierra Leone Vision 2025: Strategies for National Transformation” and the Government’s Smallholder Commercialization Program (SCP).

[3] World Bank, Bill and Melinda Gates Foundation, CAADP: Basic Agricultural Public Expenditure Diagnostic review (2003-2012).

[4] World Bank: Sierra Leone Poverty Assessment (2014); and World Bank: Sierra Leone Agriculture Sector Review: Towards Promoting Smallholder Commercialization and Agribusiness Development.

1.2 Original Project Development Objectives (PDO) and Key Indicators

11. The original project development objective (PDO) was "*to improve efficiencies along the value chain of agricultural commodities with higher benefits flowing to producers*." The PDO in the Financing Agreement (FA) on the other hand 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.

12. The brief PDO in the PAD results framework was elaborated in greater detail in the project description section, including an account of the types of initiatives to be supported by the project. "*The project will support initiatives to improve quality of produce for domestic/export markets, assist in strengthening marketing organizations at the producer level as well as private trade engaged in domestic marketing and export, support value addition, and provide limited support for filling critical gaps in infrastructure along the value chain, in conjunction with initiatives supported by Government/other donors."* The PDO in the PAD data sheet addressed the higher level objective that the project would contribute to. "*The higher-level objective of the project is to contribute to the objectives of the CAS Strategic Priority 2 of sustained growth in agriculture with increased competitiveness in export and higher value crops and increased employment."*

13. The key outcome indicators agreed upon between the Government and the World Bank at Appraisal were:

    (i*) Efficiency of agricultural value chains in food crops, as reflected in farm level value addition,* and

    (ii) *Efficiency of agricultural value chains in export crops as reflected in quality premiums*.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

14. After experiencing effectiveness and implementation delays, the project was restructured in August 2009. The PDO was modified for clarity and to provide greater consistency between the PAD and the FA. Revisions were also made to the implementation arrangements and project results framework and indicators.

15. In June the PDO was revised "to improve efficiencies along the value chain of selected agricultural commodities with higher benefits flowing to producers." The main purpose of the revision was to align the PDO in the Financing Agreement with that in the PAD, along with a refinement in the scope of the agricultural commodities to be covered by the project.

16. The two original PDO indicators relating to farm level value addition for food crops and quality premiums for export crops were dropped and replaced by one indicator agreed upon in a June 2009 letter between the GOSL and the Bank. "50 percent of all beneficiaries for selected value chains would increase their production/sales by 20 percent." Cassava, rice and cocoa were identified as the crops for project assistance.

17. The finalized restructuring paper of July 2009 revised the PDO as follows: "to increase production of selected agricultural commodities by 20 percent and sales by 10 percent through improvements in efficiencies along the value chain for targeted beneficiaries." This was intended to make the PDO more explicit in terms of outcomes, namely the project's impacts on production and sales.

18. The one revised PDO indicator was replaced with two different indicators, mostly to reflect the difference in the level of project outcomes for the two sets of crops as follows: "(i) 50 percent of target beneficiaries for the selected value chain increase their production by at least 20 percent by the end of the Project; and (ii) 50 percent of target beneficiaries for the selected value chain increase their sales by at least 10 percent by the end of the Project." Cassava, lowland rice, upland rice, oil palm, cocoa, and maize were identified as target commodities.

19. According to the Financing Agreement of September 2009, the PDO was again revised as follows:

(i) "The objective of the Project is to improve efficiencies along the value chain of selected agricultural commodities with higher benefits flowing to producers."

(ii) Indicators were also revised to**:** "(i) 50 percent of target beneficiaries for the selected value chain increase their production by at least 20 percent by the end of the Project; and (ii) 50 percent of target beneficiaries for the selected value chain increase their sales by at least 10 percent by the end of the Project."

Thus, the PDO in this formally amended September 2009 FA was not the correct one.

20. The second formal revision to the PDO occurred when the above mentioned oversight was corrected through the Financing Agreement for the Additional Financing operation which was signed in June 2011. It revised the PDO as follows: "The objective of the Project is to increase production of selected agricultural commodities by twenty (20) percent and sales by ten (10) percent through improvements in efficiencies along the value chain for targeted beneficiaries."

21. Other changes made to key intermediate indicators were as follows.

- The original indicators for component 1 were dropped and replaced by new ones to increase specificity and enhance measurability.
- The original indicators for component 2 were modified to make them simpler and measureable.
- A new indicator was added to the outcome indicators for Component 3 to measure progress on the technology improvement.

1.4 Main Beneficiaries

22. The main beneficiaries were smallholder farmers through improvement in their production and marketing channels. Other beneficiaries included traders, private sector agro-processors, and farmer organizations. Because it employed a value chain approach, the project also benefited threshers, millers, polishers, wholesalers, retailers, and importers. Government agencies responsible for quality inspection and assurance also benefited from

the project. The project strengthened marketing organizations at the producer level as well as private traders engaged in domestic marketing and export, supported value chain addition, and provided limited support for filling gaps in infrastructure along the value chain. Farmers and rural dwellers along rehabilitated roads also benefitted from reduced transport time and post-harvest losses.

23. Annex 9 of the PAD, on Economic and Financial Analysis, Table 9D, indicated that the project would target about 300,000 producer households (direct beneficiaries) out of the total number of producer households of about one million.

24. During the July 2009 restructuring, no attempt was made to define the target number of beneficiary households. At the time of the preparation of the AF operation, the PP of April 2011 included in the revised Results Framework the core indicator relating to Beneficiaries as follows: 50,000 direct and 200,000 indirect beneficiaries, with females accounting for 40 percent (20,000 direct and 80,000 indirect beneficiaries). This obviously significantly reduced the outcome of the project in terms of the number of “direct” beneficiaries from 300,000 to 50,000 to be targeted by the project.

25. The actual number of direct beneficiaries that the project covered at closing were 56,000. Indirect beneficiaries totaled 213,000. This was estimated from the beneficiary assessment. For example, out of a total of 152 chiefdoms in the country, the project covered over 95 chiefdoms with a total population of 3,356,970. The study revealed that an estimate of 30 percent of population within each catchment areas benefited from location of assets of the projects such as link roads, processing facilities and markets.

1.5 Original Components

26. Four main project components were detailed in the PAD and Schedule 1 of the Financing Agreement.

i. **Domestic Marketing Improvement** (original allocation: US$11.37 million; additional financing of US$14.5 million): Key activities included: (a) Domestic supply chain consolidation for specific crops and products, including rehabilitation of critical road links; (b) Provision of Matching Grants for rural market infrastructure improvements to address critical infrastructure needs for selected products; and (c) Knowledge management and technical assistance to improve access to market information.

ii. **Agricultural Export Promotion** (original allocation: US$6.12 million; additional financing of US$2.7 million). Key activities included (a) Upgrading and creation of market and export infrastructure; (b) Provision of Matching Grants for product development and adaptation, proactive marketing and standards compliance; (c) Introduction of high-yielding crop varieties; (d) Support for improving product quality and standards; (e) Support for identifying non-traditional exports and market opportunities; and (f) development of a market information system.

iii. **Support to Farmer-based Organizations and Technology Improvement** (original allocation: US$7.03 million; additional financing of US$1.8 million): Key activities included: (a) Provision of Matching Grants to strengthen legally registered farmer-based organizations and their unions, agribusinesses, marketing entities, and other rural businesses; and (b) support for the carrying out of studies in strategic areas that will promote agricultural research and export promotion.

iv. **Project Management, Monitoring and Evaluation and Policy Regulations** (original allocation: US$5.47 million; additional financing of US$1 million): Key activities included: (a) Establishment of a Project Coordination Unit to carry out the management and monitoring and evaluation functions of the Project; and (b) Support for the development of key policies and regulations, to strengthen the enabling environment for Project activities, and the preparation of feasibility studies for setting up a commodity trading exchange.

1.6 Revised Components

27. The Additional Financing operation of September 2011 revised the Original Components (and sub-components) somewhat to add the following discrete activities:

(i) Component 1(a) (iv): <u>Added:</u> Support rehabilitation of feeder roads in selected districts.

(ii) Component 2(f): <u>Added:</u> Strengthen the capacities of cocoa cooperatives in Kailahun, Kenema and Kono districts for replanting existing farms and marketing of cocoa produce.

(iii) Component 2(h): <u>Added:</u> Provide support to community radios for dissemination of extension messages to farmers.

(iv) Component 3(a): <u>Amended as follows:</u> Provision of Matching Grants to finance: (i) the strengthening of legally registered farmer-based organizations (FBOs) and their unions including the National Federation of Farmers of Sierra Leone and its constituent members, agribusinesses, marketing entities, and other rural businesses; (ii) improving policy regulations including development of FBO specific benefit guidelines; and (iii) providing market information.

(v) Component 3(c): <u>Added:</u> Carrying out of a study on rice marketing and implementing recommendations of the study.

(vi) Component 4(f): <u>Added:</u> Strengthening the institutional capacity of MAFFS to implement project activities.

1.7 Other significant changes

28. The July 2009 restructuring effected three critical changes through a Level 1 restructuring approved by the Board: (i) modification in the institutional arrangements for implementation; (ii) emphasis on feeder roads, requiring both a recasting of project costs and reallocation of funds; and (iii) revision of the PDO and its indicators (discussed above under section 1.3), and modifications to some of the intermediate results indicators.

29. During the restructuring of the project, the institutional arrangement was revised in order to resolve the problems associated with the delays in implementation of the Project. The project design envisaged co-management by two ministries: the Ministry of Trade and Industry (MoTI) and the Ministry of Agriculture, Forestry and Food Security (MAFFS).

The highest decision making body, the National Steering Committee (NSC) was therefore to be co-chaired by the Ministers of the two ministries. The roles and responsibilities of each ministry in project management, however, were not defined and the two ministries subsequently failed to achieve an appropriate degree of coordination between them. The lack of adequate coordination and consensus between the two ministries on several issues including the appointment of Project Coordinator, Matching Grants Manager, and procurement of goods and services, delayed project effectiveness by ten months. It was thus apparent that at the design stage, the willingness and commitment of the two ministries to work together was overestimated. Therefore, at restructuring, the responsibility for overall management of the project was given to MAFFS. This included (i) chairing the National Steering Committee (NSC) which had the strategic and oversight responsibilities; and (ii) hosting of the Project Coordinating Unit (PCU) which coordinated the day to day management of the project. The Deputy Ministers for MoTI and MIALGRD were designated as deputy/co-chairs.

30. It was also realized that the growing importance and institutional empowerment of Local Councils (LCs) in the implementation of Government sponsored programs may have been underestimated in the original project design. As such, the role of LCs was strengthened. Funds re-allocation was also carried out to give greater emphasis to feeder roads rehabilitation. The Sierra Leone Roads Authority (SLRA) was mandated to provide technical support by ensuring that adequate capacity exists in the Local Councils to support the implementation of the feeder roads aspects of the project and also responsible for national coordination.

31. The focus on feeder roads and the revised implementing arrangements basically required a reallocation of about 20 percent of the commitment across various project activities. With a reduction in all project activities, notably Matching Grants (of about US$5.9 million allocated to Matching Grants,US$3.4 million—58 percent of the original allocation—was reallocated), additional funds were allocated to feeder roads under Component 1 (US$3.5 million) and project management under Component 4 (US$2.4 million). The Matching Grants support which was meant to address access to finance issues (through the three main project components) was reduced by 40 percent from US$8.6 million to US$5.2 million (a 40 percent reduction), and Domestic Supply Chain Consolidation (which predominantly included feeder roads) increased from US$5 million to US$8.3 million (a 166% increase).

32. In 2011, the Bank provided additional financing in the amount of US$20 million to further support the scaling up of feeder roads rehabilitation, support for the cocoa sector, and capacity development of farmer based organizations. For the Additional Financing operation, approved by the Board in May 2011, in addition to the project components that were revised somewhat (discussed in Section 1.6), the PDO was correctly reflected in the Financing Agreement (discussed in Section 1.3 above), and the closing date was also extended by three years, from November 14, 2012 to November 14, 2015.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

33. The RPSDP was one of the first major post-war agricultural investment projects and was designed to build on the achievement of a responsive agriculture sector that was prioritized by GOSL. Several projects by donors were addressing productivity successfully and the RPSDP emphasized establishing linkages to the market. Based on studies, the project approach focused on access to markets and improved opportunities for farm to market linkages. The project was therefore well founded on the series of analytical work of the post-conflict era in Sierra Leone.

34. The approach was also based on key lessons from past operations, that for successful rejuvenation of the agriculture sector, production efforts must be accompanied by effective marketing of the commodities produced. A diversified agricultural export base would require considerable and medium to long term investment. Growth and diversification could not rely solely on the activities of the smallholders but would require entrepreneurs to invest in processing and marketing in order to drive the sector forward. The design took appropriate cognizance of these lessons and placed extensive priority on the role of private sector. Furthermore, the designed institutional arrangement for implementing the project drew inspiration from past lessons on simplifying and empowering the coordination arrangement of a multiple agency implementation under the auspices of a strong management entity.

35. Quality at entry was not assessed.

36. **Assessment of the project design.** The Project Development Objective was relevant and appropriate to the development context of Sierra Leone. However, it was too broad and lacked the focus to measure achievement and attribute results to project intervention. Moreover, three different statements of PDO were portrayed by the PAD, the FA and the first ISR. The PDO emphasized efficiency as a target without adequately defining how it was to be measured. The PDO stated in the PAD was not sufficiently specific in that it did not define and limit the scope of the "agricultural commodities" it referred to. Also, some of the original indicators as stated in the PAD were not clearly stated and/or easily measureable.

37. The project components were properly aligned to the objectives and were articulated properly to address the needs identified. Yet it was ambitious because of its multi sectoral nature, which involved agriculture, roads, trade and local authority. This pointed to a strong coordination mechanism which was well noted at the design stage and joint implementation by the responsible ministries was proposed. Furthermore, the design envisaged cooperation with the development partners in strategic partnerships, identifying key synergic and interfacing activities, synergizing work plans, agreeing on joint implementation as feasible and establishing coordination arrangements as the key elements of the project implementation plan and annual work plan. This was a well thought out process to strengthen capacity of the client but the framework for cooperation procedures was not developed and included in the project implementation manual as planned. The design did acknowledge the lack of adequate capacity of the participating ministries for coordination as one of the risk elements but did not make any special arrangements to

mitigate this source of risk. It also relied on the commitment and interventions of EU, IFAD, and FAO based projects to support the strengthening of the agencies.

38. The empowerment of Local Councils (LCs) in the implementation of rural development programs is widely recognized as necessary to mobilizing participation among local actors, ensuring their buy-in, and enhancing the sustainability of project outcomes. The role of the LCs was underestimated in the design and only limited their roles through their district implementation committees (DICs) to the review and approval of Matching Grant proposals from prospective beneficiaries within their area of jurisdiction and passing over the proposals to the national level for funding, after the necessary due diligence. They were not involved in the appraisal of sub-projects or in their monitoring. At first, there was also no active participation of Ministry of Local Government and Rural Development (MoLGRD) (which has oversight responsibilities over the LCs) in the design of the institutional arrangements.

39. Therefore, the initial project design at Appraisal had a high degree of relevance, government commitment and planned good donor coordination, but it was an ambitious design without adequate implementation arrangements and SMART results framework. The overall project design was inadequate to fully contemplate the magnitude of the coordination required.

40. Beneficiary participation was also minimal at the design of the project. The farmers based groups including National Federation of Farmers in Sierra Leone (NaFFSL) and FBOs were not engaged in designing of the RPSDP. That may have affected the scope and capacity of activities and maintenance blue print of the equipment supplied.

41. **Assessment of Risks.** The potential risks noted during preparation were (i) lack of adequate capacity in the Ministries of Agriculture and Food Security and Trade and Industry to coordinate and oversee the use of funds and lack of in-country capacity to provide the specified technical assistance under the different components ; (ii) rent-seeking and elite capture of resources (iii) reduced support from donors for complementary programs especially for private sector development and improvements in financial systems; and (iv) variations in international commodity prices or changes in market demand. Overall, the risks were assessed moderate but no mitigation was proposed for the coordination risk envisaged in the project. Given the complexity and multi-sectoral nature of the project, the glossing over this risk was a critical oversight during preparation and actually haunted the project during implementation.

42. Other risks that were not identified during preparation included questions concerning the sustainability of project outcomes, and the weak capacity of the private sector and government policy support/reforms for exports.

2.2 Implementation

43. The Sierra Leone Rural and Private Sector Development Project (RPSDP) was approved by the Board of Directors in May 22, 2007 and was anticipated to become effective by October 31, 2007. The legal agreement was however only signed on August 2, 2007. Elections were held in the country in September 2007, and the subsequent change in Government temporarily brought activities of the Project to a standstill necessitating extension of effectiveness to March 30, 2008. A second extension of project effectiveness

date to June 30, 2008 was necessitated by the inability of the Government to fulfill effectiveness conditions, namely; the appointment of PCU staff and a firm to manage the Matching Grants. The causes of delay were twofold: (i) weak procurement capacity within the Ministry of Agriculture Forestry and Food Security (MAFFS) and the Ministry of Trade and Industry (MoTI) to handle initial procurement and recruitment activities; and (ii) inadequate coordination between MAFFS and MoTI in project implementation.

44. As a result of the delays and unsatisfactory performance in project implementation for the reasons cited above and to provide additional resources to rehabilitate feeder roads, it became necessary to make modifications to the project implementation arrangements, reallocate resources, and modify the PDO and performance indicators. Consequently, a restructuring Project request by the Government was approved by the Board on August 5, 2009. The main focus of the restructuring was to resolve the problems associated with the Project's institutional framework as it was the single most important constraint in the way of satisfactory implementation of the Project.

45. *Weak Project Coordination Capacity*. The lack of adequate coordination and consensus between the two ministries (MAFFS and MoTI) on several issues delayed project effectiveness and the setting up of the institutional structures for effective field implementation. Though this was observed as a potential threat at Appraisal, there was no mitigation proffered for the threat and nothing was put in place to ensure a strong coordination until 2009 restructuring of the project. Consequently, as at August 2009 (after more than two years of approval by the Board), only US$1.2 million representing 4.07 percent of total amount of US$30 million of Grant Proceeds had been disbursed. The restructuring designated the MAFFS as the lead government agency and also gave greater autonomy and authority to the PCU in the day to day administration of the project, while ensuring that MAFFS and MoTI take appropriate measures to monitor performance.

46. After the restructuring, the performance thereafter improved and the Bank provided additional financing in the amount of US$20 million in 2011 to further support the scaling up of feeder roads rehabilitation, support for the cocoa sector and capacity development of farmer based organizations. There was also an extension of the closing date to November 14, 2015.

47. *Mid Term Review*. The Mid Term Review of the project was carried out from June 24 to July 9, 2010. The selected commodities envisaged for support under the project were cocoa, oil palm, ginger, rice, cassava, cashew, and sorghum. Poultry, livestock and fisheries which were to be supported on pilot basis. During the MTR, the objectives of the project were found to remain valid and relevant, but not likely to be achieved for all the selected commodities. Support for oil palm had to be suspended due to the moratorium placed on the commodity by the Bank. Except for cocoa, rice and cassava, support to all the other commodities had been limited or non-existent due to the demand driven nature of the project. Commodities most favored by producers to which requests for matching grants were submitted in substantial numbers were rice, cassava and cocoa. Moreover, the availability of improved planting materials for oil palm, ginger, sorghum and cashew to boost production was limited. In view of these developments and the limited time and resources available to the project, the MTR mission recommended a change in project focus towards cocoa, rice and cassava and the implementation manual was amended accordingly.

48. The MTR observed that there was a marked improvement in implementation within one year of restructuring of the project. The project had successfully: (i) established working relationships with all 13 district councils; (ii) approved matching grants request for 75 FBOs with a total membership of 4803 beneficiaries (male, 2337; female 2466), across the country, (iii) made progress in providing storage sheds, drying floors and processing equipment for the approved FBOs; (iv) supported the creation of cocoa cooperative with a total membership of 12658 (male, 10256; female, 2402), (v) signed contracts for the rehabilitation of 468 km of feeder roads some of which reached advanced stages of completion within a record time of four months, (vii) supported the rehabilitation of cocoa clonal gardens and initiated adaptive trials on rice and cassava, (vii) established a seed and planting material distribution scheme to provide improved planting materials for rice, cassava and cocoa to farmers, (viii) supported the establishment of a market information system, (ix) initiated studies to support the establishment of food safety standards to boost exports , and (x) disbursed approximately US$ 10 million of project funds with additional US$ 9 million committed to on-going activities from November 2009 to June 30, 2010, leaving an uncommitted balance of US$ 11 million of the US$30 million Grant.

49. *Priority shift on selected commodities and feeder roads***.** The original project was very ambitious and envisaged support of seven value chains while three other value chains were to be supported on pilot basis. Given the project envelope, this did not allow deepening of intervention and also spread the focus of project management too thinly. It was only at MTR that the prioritization of commodities was carried out and restricted to three value chains: rice, cassava and cocoa. The remaining two years of project life was insufficient to realize much intensity on the selected value chain.

50. During the restructuring in 2009, there was project fund re-allocation to shift priority to road rehabilitation. A total of US$2,192,000 was reallocated from matching grants to civil works to cater for roads. This was meant to support scaling-up of feeder roads rehabilitation which was seen as a priority in the context of a post-conflict situation. The thrust of the project at appraisal was to support private sector investment and focus on access to market. The change in emphasis at restructuring which was based on request from government and possibly on the need for disbursement was not in tandem with the development objectives of the project. At closure, the project rehabilitated 971.9 km of rural feeder roads, constructed 62 bridges, 1643 culverts. This represented 97 percent of the targeted feeder roads of 1,000km.

51. *Empowerment of the Local Councils.* There was limited role for the LCs in the project at the initial stage of implementation. At appraisal, their role, through their District Implementation Committees (DICs), was limited to the review of Matching Grant proposals from prospective beneficiaries within their area of jurisdiction and passing over the proposals to the national level for approval. But with the restructuring in 2009, increased roles were assigned to the LCs. They were empowered to develop district economic plans as priority setting references for investments to be supported by the Project in order to ensure transparency and avoid elite capture. The local councils were further mandated to appraise, approve and sign the grant agreements for sub-project proposals that meet the criteria for funding under the guidelines prescribed in the Matching Grants Manual. This is best practice and very critical for sustainability of the project at local level.

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52. *The outbreak of Ebola Virus Disease (EVD)* from August 2014 till its subsidence in April 2015 impacted implementation of the remaining project activities at the time to a large degree, including the rehabilitation of feeder roads. The outbreak resulted in decimation of the workforce and abandonment of farms for fear of the disease. Thus, the total land available to be cultivated could not be fully put to use.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

53. **M&E Design and implementation:** The M&E systems under the rural private sector development project was designed to be proactive and responsive to the daily demands of management of the value chains. The indicators were revised at restructuring and AF to remove ambiguity and make them measurable and attributable to project implementation. The M&E system was set up and managed by an M&E Specialist hosted at the Project Coordinating Unit (PCU). This officer worked with the Ministry of Agriculture's Monitoring and Evaluation outfit (PEMSD). This was mainly because of expertise and regional outreach that PEMSD had all over the country. PEMSD had four M&E staff in every district with expertise including M&E officers, Statisticians and Enumerators. Their main role in the project was to help with the day to day monitoring of project activities. Alongside the PEMSD outfit, the project also hired district Grant Managers who provided some support in implementing activities and monitoring performance. In addition to these, M&E focal persons were also identified within all stakeholder institutions to provide support for the whole M&E systems. Earlier in the design, a consulting firm was hired to develop the M&E system with reporting formats. This allowed the implementing agencies to report performance in quarterly and mid-yearly reports, thereby creating a robust database of performance indicators, market intelligent reports on export data, impact evaluations through household surveys at baseline, mid-term and at completion, maintaining a solid database of matching grants sub-projects to determine the impact on beneficiary incomes, and a project website where all of the information was disseminated. Qualitative interview-based surveys were expected with members of FBOs, market traders, and exporters and associations. Additionally, beneficiary assessments through score cards were proposed for larger investments.

54. The implementation of the system was thorough and formed the basis for the baseline survey. It incorporated the development of forms for data collection that were filled periodically and sent to PCU for collation. Data from these forms were stored in databases and used for reporting as and when needed. The forms and databases were developed by the M&E specialist, who in addition to developing the forms, also provided training on how to administer the forms. All stakeholders were charged with reporting their activities to the PCU periodically (quarterly). Periodic surveys were also carried out to provide additional information needed by the project to populate the Results Framework or report to the donors. Monthly and quarterly and annual project reports were developed for the Ministry of Agriculture and the Donors. The M&E specialist also provided support for internal controls for the different departments within PCU. These included finance, procurement and engineering. These different monthly reports were submitted to the M&E specialist who collated and passed them on to the MAFFS. The M&E specialist was also responsible for guiding all surveys within the project and carrying out initial analysis of the data. The data collected was the basis of the price information system which was feeding the extension system regularly, beneficiary score cards which form the basis of feedback mechanism and the GRM monitoring, baseline survey report, annual report and beneficiary impact assessment survey report. The yield and production data were also made specific to farm sites of the beneficiaries and collected annually throughout the project life

cycle. The implementation involved M&E Officers of MAFFS who were assigned to monitor RPSDP implementation activities and report to the DICs through the PSUs. The role of the MAFFS M&E staff at the district level was very prominent and complimentary to the project M&E function. The project developed a robust M&E system that collects data regularly for process monitoring and was adequate to support farmers' record keeping and subsequent analysis.

55. M&E Utilization. The collected data was utilized to prepare periodic reports and actually form the basis of prioritization of value chains in 2011 and also computation of farmers' income on the project. During the impact evaluation carried out on the project, the M&E produced the data utilized to compare with the 'non – treatment groups'. Using the "difference- in- difference" assessment method, the evaluation was able to establish the impact of the project on production, cultivated area and productivity of targeted value chains. The post-completion Economic and financial analysis was also carried out based on robust data produced by the M&E system. At mid-term review, the changes in RF and adjustment made on the implementation of the rehabilitation of feeder roads resulted from analysis of series of data which are also utilized for process monitoring of the implementation process.

56. The greatest challenge that faced the M&E unit was the high turnover of M&E specialists. Over the span of the project, three M&E specialists were employed but the established M&E system at all levels of the project functioned as designed.

2.4 Safeguard and Fiduciary Compliance

57. RPDP was an Environmental Assessment category B project. The projects physical activities including the construction of processing facilities, rural markets and feeder roads rehabilitation resulted in the triggering of two safeguard policies: Environmental Assessment OP/BP 4.01 and Involuntary Resettlement OP/BP4.12. Environmental and social risks were managed through the application of an ESMF, RPF, and PMP. Various mission reports have documented satisfactory ratings for safeguards implementation. Some steps towards the project environmental and social due diligence work as well as challenges and lessons learnt are highlighted below.

58. **Safeguards due diligence for land acquisition.** Lands for construction of processing facilities and rural markets were either purchased by the beneficiary groups or voluntarily donated by land owners in the communities. Evidence of land acquisition was submitted as part of the application package by potential beneficiaries before subprojects were considered for funding. Field visits were conducted prior to final award of grants to check for appropriateness of location, types of economic activities, willingness of community to participate, evidence of land agreement etc. It is however noted that these field checks needed to be more sufficiently robust to identify key E&S impacts including verifying for waste generation, noise and dust pollution, vulnerable groups etc.

59. Roads were diverted to avoid having feeder roads rehabilitation works go through individual or community farms and assets. In some instances, farmers were given time to harvest their crops before civil works commenced. The project instituted a Grievance Redress Mechanism system, which had committees established form the chiefdom to district levels. These committees were very proactive in sensitizing communities on project

activities and provide advice to the project and contractors on sensitive issues, which helped in preventing grievances. As such there were only two notable cases of grievances which were resolved amicably with the Grievance Redress Committees at the chiefdom level in the concern districts. The project developed a grievance complaint log in which all grievances were supposed to be logged at the chiefdom for onward transmission to the PCU through the Project's district offices. There is however room for improvement in the recording of such grievance redress process in line with the Banks's safeguards policies and this need to be enhanced in subsequent projects.

60. **Safeguards capacity and compliance tracking.** Project team included a designated focal person for safeguards (but was tasked with other assignments) with support from the PSUs at the district levels. Training was provided to the project team by the World Bank. There was also a follow up trainings at the district level by the project team. Safeguards capacity reportedly appeared insufficient for the load of E&S work as project was operational in several Local Councils demanding extensive monitoring and supervision for compliance. . However, throughout project implementation, safeguard compliance monitoring support was provided by the Environmental Protection Agency (EPA) and the Ministry of Gender and Social Welfare. Senior officials from these institutions regularly participated in safeguard monitoring missions. However, similar projects with this scale of influence should include safeguard specialists to be part of the PCU staff to facilitate management and planning of the E&S work including ability to independently review the safeguards requirements for the project, prepare detailed work plan for E&S work, establish liaison and work closely with the EPA, develop E&S checklist and monitoring forms etc.

61. **Safeguards Reporting.** Project routine progress report captured E&S activities of the Project. Grievances related to project activities were recorded in Grievance Log Book.

Financial Management

62. The project's financial management risk was rated as Substantial at appraisal. The risk was mitigated by the establishment of a Project Coordinating Unit manned by professionally recruited and qualified personnel to handle day-to-day project management for the Government of Sierra Leone and supervision by the Bank's FM Specialist, as well as provision of appropriate support to the Project Finance Team Members. Most of the time the audits were undertaken and interim financial reports prepared in a relatively timely manner. Compliance with provisions of the operational manual as well as other positive FM actions had the project maintain an ISR rating of satisfactory for most part of the project. However, due to cash management related issues as well as late submission of reports the ISR was downgraded to moderately satisfactory towards the end of the project.

63. There was a case of fraud involving a contractor who was awarded a contract to construct a market, a hand dug well, and a VIP latrine under the Project. During the due diligence process, the project team realized that the contractor presented a fake Bank guarantee certificate. Upon advice from procurement, the contractor was disqualified and the contract was then awarded to the second lowest evaluated bidder. The client was also advised to report the case to National authorities that handle fraud cases.

64. Upon further follow-up with the project it was noted that the same contractor was to be awarded another contract for rural feeder road rehabilitation. Even though the

documentation for this was found by the project review team to be genuine, the Bank procurement specialist advised that this contract should also be cancelled. The case was reported to INT and an investigation into the matter was successfully carried out.

Procurement compliance

65. All procurement activities were undertaken following the Bank procedures and in line with the approved procurement plans. The project did however face significant contract management challenges, particularly for feeder roads rehabilitation and the contraction of community market infrastructure at the district level. In the case of feeder roads, the major challenge was that so many lots involving so many contractors were taking place concurrently mainly during the second phase. This placed enormous strain on the available capacity at the PCU and Sierra Leone Roads Authority (SLRA) to provide adequate monitoring of the works. In the case of community markets, most of them were completed on time but delayed to be put to use because of outstanding payments (25 percent of contract values) which, as per the original design were to be paid by Local councils in order to enhance ownership. However, due to financial constraints, the outstanding payments were eventually paid through project funds. The key lesson from this project is to strengthen procurement planning and packaging, as well as providing adequate capacity for contract management.

2.5 Post-completion Operation/Next Phase

66. **Sustainability of Project outcomes**. The project, during implementation clearly provided arrangements to ensure sustainability of the project activities. The assets formed under the project were clearly "marked" to show the entity that owns it. Also project related policies developed were well seated within the institutions that were responsible. The institutional set up for the project both at the national and district level which encompassed permanent statutory entities was strong, integrated and had the necessary motivation to drive the project and continue its support after project closure. However, there are still some sustainability challenges, a number of which are highlighted in the table below. The weakness identified within the operational structure was the ineffective internal organization and performance of the LCs.

67. The project supported the maintenance of feeder roads rehabilitated under the first phase of the project which were the responsibility of the LCs. The District Implementation Committees (DIC) at the LC levels were also not functioning as expected. In most Districts the PCU and District Technical Teams of the RPSDP had to intervene to perform the functions of these LC level units. Sustainability of the project at the farmers and community level depends heavily on the growth patterns of the FBOs as community organisation linking farmers to formal institutional structures. The governance arrangement and organisational capacity of the FBOs were strong. The project strengthened and resourced the FBOs by providing capacity building training and provision of processing facilities for value addition. It also provided seed capital for trading in crops and basic equipment such as stitching machines, scales, and moisture content detectors, and created conditions for processed crops to meet acceptable marketing standards. But the linkage of FBOs with government agencies and other private sector players was very weak.

Table 1; RPSDP Sustainability actions and challenges

Core activities	Responsible agencies	RPSDP Sustainability activities	RPSDP Sustainability challenges
Feeder Roads	Local Councils/SLRA	i. Personnel from SLRA were second to PCU to provide technical input into link road construction	i. LCs had no capacity in providing counterpart funding for road construction; ii. LCs do not have capacity to undertake procurement activities in a timely manner with minimum errors. ii. Rural roads to farming and market centres grossly inadequate.
Matching Grants for market improvement	MoTI/Local Councils	i. FBOs and Cooperatives were the main actors in the provision of processing facilities, and made due their counterpart funding of 10% in local resource, labour and sometimes funds; ii. There is clear FBO ownership of the processing and storage facilities with good management structure in place for their sustainability.	i. Poor model of selected processing facilities ii. Selected processing facilities without compliments of other machines
Internal Market Information	MAFFS	i. Support to the PEMSD of MAFFS in hosting the Domestic Market Information System (DMIS) through which broadcasts market information through local radio stations and produces a quarterly market bulleting.	i. Local market prices are aired on a weekly basis in all 13 agricultural districts through community radio programs. However, with elapsed of funding, the programme is ceased to be aired on the various station; ii. Poor information asymmetric in favours traders iii. Poor access to market information by farmers iv. Long chain of middlemen and intermediaries between the farmers and the final consumers
Market Infrastructure	Local Councils/ MLGRD		i. The role of MoTI and Local Councils was minimal in providing technical and financial support for Matching Grant for Market Improvement. ii. 100% financial support was provided by the World Bank

68. **The Follow on Project.** The follow on project to RPSDP was approved by the Board on February 18, 2016. The project, the Smallholder Commercialization and Agribusiness Development Project (SCADeP), has incorporated into its design some of the lessons learned from shortcomings of the RPSDP. It is designed to focus primarily on addressing the most critical factors which cause market failures that constrain productivity, market efficiency and competitiveness such as credit market failure, market coordination failure, lack of smallholder production skills and organization leading to high aggregation costs, high processing and marketing costs, as well as low quality. Following on the achievements of the RPSDP, the new project intends to improve quality issues, ensures better marketing in order to improve competition and attract price premium for the farmers.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Rating: Modest

Relevance of Objectives

69. The relevance of objectives is rated as **high**. The project objectives of increasing production and sales of selected agricultural commodities through improvement in efficiencies along the value chain was relevant to government priorities at design stage and is still relevant now. The overall goal of the agricultural sector under the Sierra Leone Vision: the Agenda for Prosperity (2013-2018) was to have a sustainable, diversified, and commercial agriculture sector, which ensures food self-sufficiency, increase exports and create jobs opportunities for Sierra Leonean men and women. The agricultural policy therefore emphasized the objectives of increasing agricultural productivity through a variety of support measures along the entire agricultural value chain, promoting commercial agriculture through private sector and FBOs participation, and promoting efficient and effective sector resource management systems.

70. Since 2008, the Government's agricultural strategy has been driven by the National Sustainable Agriculture Development Plan (NSADP), out of which it developed the Smallholder Commercialization Program (SCP). The SCP has been a flagship sector program aimed at making agriculture the 'engine' of socio-economic growth through the development of commercial agriculture. The SCP focused on intensification, diversification, and commercialization of smallholder agriculture by improving value-addition and access to marketing. The SCP, which started implementation in 2010, was a five-year program and came to a close towards the end of 2015. The Government has been developing its successor program, the Inclusive, Comprehensive Agricultural Development Program (ICADEP) which will continue to pursue smallholder commercialization as a basis for inclusive sector growth because major challenges to agricultural development in the country has been identified to include low productivity due to lack of improved technologies including agricultural inputs; low levels of value chain integration mainly due to inefficient production systems that undercut competitiveness. Others challenges remain, including lack of access to markets for both inputs and outputs; high interest rates for of agricultural finance; low farmers' organizational capacity; and low institutional capacity, especially for the provision of agricultural research and development and extension.

71. Since 2004, the Bank and other development partners have supported the implementation of Sierra Leone's agricultural strategy. The Sierra Leone Country Assistance Strategy

(CAS) 2006-09, which was developed based upon the Government's "Sierra Leone Vision 2025: Strategies for National Transformation," and is aligned with the three pillars of the PRSP. Addressing food security through the rehabilitation of the country's agriculture sector emerged as a clear objective of the GOSL. The CAS therefore identified the RPSDP, an integrated rural/private sector development initiative, as a key implementing instrument of Strategic Priority 2. The project supported the CPS pillar aimed at diversifying the sources of economic growth. Currently, the RPSDP is also aligned, relevant and includes specific interventions that are in line with the Government's Ebola Recovery Strategy.

72. The project objective, though relevant, was overly ambitious. It tried to address issues relating to a number of commodities (rice, cassava, oil palm, cocoa, coffee, fisheries and livestock, etc.), and a range of constraints (roads, markets, access to finance, market intelligence, matching grants for food crops, identification of specific constraints for specific export commodities to decide on infrastructure strengthening, enabling environment such as labs, matching grants to improve quality and standards of produce, market intelligence, value chain players interchange, strengthening FBOs, studies for policy aspects including passing laws, etc.). Eventually, the focus was restricted to just rice, cassava and cocoa. The Matching Grants component was considerably reduced and of the 1,000 sub-projects expected to be implemented under Component 1, no more than 275 were implemented, the focus shifted to rehabilitation of rural roads (from less than 150 kms at appraisal, the project target increased to 1,000 kms; actual implementation was 971 kms at closing), and a lot more funds were devoted to project management institution strengthening.

Relevance of Design and Implementation

73. The design, including significant adjustments made in the process of implementing the project, served to further embed the program into government structures and is rated as **modest**. At appraisal, the design followed the findings of many studies including the Diagnostic Trade Integrated Study (DTIS) which noted that the growth in the sector was highly desirable for employment creation and poverty reduction but would require strong export markets. Also according to the PSIA (see page 28 of PAD) report during project preparation, the farmers had little interaction with the extension service, and without a genuinely revitalized extension service, productivity improvements could not be expected. Also the report noted that farmers do not use inputs as much as they should, and increase in amounts of fertilizer use and improved seeds is critical for progress in productivity. Additionally, there was the need for roads, market infrastructure, and agro-processing facilities, and the project rightly provided support for this through rehabilitating "critical links" of feeder roads that were intended to support value chain efficiencies. Therefore, the design sought to enhance farmers' access to markets, increase their sales, and improve prices and exports. The components were appropriately structured, but less emphasis was given to the productivity of the farms and removing binding production constraints. The design focussed more on value addition and market access. As such, the gains in value addition and market access was not properly backed up by efforts to enhance productivity of farmers.

74. During restructuring in 2009, and the additional financing in the amount of US$20m in 2011, there was a further shift in emphasis to roads rehabilitation. The rehabilitation of roads in the AF operation became an employment generator in the short run. The shift of emphasis to roads rehabilitation may have distracted necessary attention from improving the performance of the smallholder farmers and from removing constraints along the value

chains to enhance achievement of the PDO. The project did not really focus in a thoughtful way on extension and farm productivity issues. A huge emphasis was placed on Matching Grants to take care of storage, inputs, extension, agro-processing facilities, among other things to create a supporting environment for ag productivity increase. The connection between the project activities and the outcomes in terms of productivity and price increase was not clearly established in the design and most of the benefits were expected to flow as a result of market access through feeder roads. Although sale price was expected to increase, there was no appropriate link to production of beneficiaries. Finally, passing of a number of laws relating to seeds, fertilizers and pesticides was not provided a link with the various activities of the project. It could easily have been excluded from the project without losing much substance.

75. The weak coordination arrangements slowed down implementation considerably. Given these considerations, the relevance of objective, design, and implementation is rated as **modest** for both the pre- and post-restructuring phase.

3.2 Achievement of Project Development Objectives

Rating: Substantial

76. The PDO was designed to be achieved from a combination of many factors including the intermediate outputs. At project appraisal, farmers were constrained by low yields, post-harvest losses, and lack of access to markets due to bad feeder roads. Furthermore, the farmers were subjected to farm gate prices which were very low because of sale volume, lack of storage, and desire for immediate disposal of produce and low participation at local market by traders. Good feeder road were expected to attract more buyers, increase competition, and make for better farm gate prices. Therefore, enhanced yield due to improved planting materials was expected to translate to increased production while increased farm gate prices were expected to enhance sales volume of the farmers.

77. Yield is a core KPI while changes in cultivated area was measured as an intermediate indicator. At end of project, the impact evaluation indicated a substantial increase in production due to increase in yield and the cultivated area. Expansion of land for rice cultivation increased from an average of 1.19ha per farmer to 1.97ha; while that of Cocoa increased by an average of 0.67ha per farmer. Also due to rehabilitation of major link road on the project, the sales volume increased several folds over the baseline. The impact evaluation survey indicated that sales of cassava farmers increased by more than 300 percent while that of cocoa increased by more than 519 percent over baseline. (see Annex 2). The project distributed lots of improved seedlings and enhanced the capacity of FBOs on agronomic practices so as to increased yield and boost production of the selected value chains. The support on assets, market infrastructure and agro-processing equipment also increased value addition, improved the aggregation part of the value chain and strengthen the demand for farmers produce. All these assisted to enhance value chain efficiencies which translated to increase in both farm gate and producer prices and increased sales volume for the farmers especially during the last three years of project implementation.

78. In addition to the domestic supply chain consolidation through road rehabilitation and provision of matching grants, the provision of knowledge management and technical assistance to improve access to market information assisted the FBOs to determine when and where to sell their produce at optimal prevailing prices. Furthermore, the project supported the cocoa cooperatives by providing access to high yielding planting materials

for the rehabilitation of the old plantations, the capacity building/training on better fermentation and storage structures to improve the quality of the cocoa beans, the establishment of Kayeigorma Cocoa Company to facilitate aggregation and trade arrangements with exporters. All these enhance the quality of graded beans and therefore prices as well as volume of sales. (see Annex 2 (a) and (b) on outputs and the matrix linking outputs to outcome)

79. The assessment of the PDO was carried out using a “split rating” approach with 2011 as the split –rating date. The PDO was first amended in the July 2009 restructuring of the project but was missed out in the FA. Later on, during the AF in June 2011, this oversight was corrected through its incorporation in the then amended FA. Thus, the actual PDO revision date could be considered as June 2011. The initial revision was effected so early on during the seriously delayed project implementation when only US$3.7 million of the US$30 million commitment was disbursed and actual incurred expenditure was no more than US$1.2 million

80. Given the changes that occurred during the AF carried out in June 2011, the need for assessing the project outcomes based on the June 2011 as the split-rating date was considered to give correct assessment of the achievement of the development objectives. Some of the changes include the PDO indicators which, though remained the same (somewhat), the targets were made less ambitious. For example, the 20 percent productivity improvement target for 50 percent of the target beneficiaries was first introduced at 2009 restructuring. The baseline was provided for various crops (cassava: 13 tons/ha, etc.) and final year December 2012 target was a 20 percent increase or a final year productivity of 15.6 ton/ha. This was revised in 2011 during AF operation to a target of 12 tons/ha (lower than restructuring target) over a longer period (up to December 2015). Likewise for rice. The restructuring target for productivity increase was set at 1.06 tons/ha but the AF reduced this to 0.88 tons/ha to be achieved over a longer time period.

81. For the 10 percent “real” sale price increase target indicator introduced first at restructuring in 2009, baseline was provided as Le 1,170/kg for rice, the target was undetermined but to be achieved by December 2012. The baseline was revised at AF to Le 1,320/kg of rice and the target was set at just 10 percent increase or Le 1,452/kg of rice (no mention of “real” increase and over an additional three year period, by December 2015). Finally, the number of project beneficiaries (see under Section 1.4 below) was reduced at AF from the PAD target of about 300,000 producer beneficiaries to 50,000 direct beneficiaries.

82. As such, the PDO achievement assessment would be based on a split-rating approach with the June 2011 AF approval date as the split-date.

83. For the **pre-restructuring phase**, the achievement of PDO assessment is as follows. The indicators remain unchanged but the targets are amended based on evidence from PAD economic and financial analysis on beneficiaries.

(i) ***Indicator 1**: 50 percent of targeted beneficiaries achieve 20 percent increase in production (interpreted as productivity increase).* This would mean a target of 150,000 producer beneficiaries since the target from Economic and financial analysis of PAD is 300,000 beneficiaries. The project achieved a coverage of 56,000 direct beneficiaries (rated Unsatisfactory: 2)

The table below depicts the target and the achievement of the objectives. From the table, the target for the beneficiaries was not achieved and rated unsatisfactory with a rating of 2. However, the target for productivity was partially achieved in most cases. Given the low level of beneficiary coverage, the achievement on productivity is rated Moderately Unsatisfactory with a rating of 3 (please see annex 10 for details).

Table 2: Pre-restructuring assessment of Productivity objective

	Target	Achievement	Achievement
Beneficiaries	150,000	17,491	11.6%
Productivity of Cassava	15.6 mt/ha	14 tons/ha	89.7%
Productivity of Rice	1.03 tons/ha	0.86 tons/ha	83.4%
Productivity of Cocoa	0.5 tons/ha.	0.65 tons/ha	150%

(ii) ***Indicator 2**: 50 percent of targeted beneficiaries achieve 10 percent real increase in sales (interpreted as sale price increase).*

Assuming the baseline prices data from the AF of 2011 which appears to be more accurate and more stringent (otherwise, the original baseline data for the indicator as indicated in the AM was lower) and also factoring in inflation at 47 percent during the period 2012-2015, with the expected target of 10 percent price increase, we have the following sale price targets and achievement as detailed out in the table below.

Table 3: Pre-restructuring assessment of Sales objective

	Target	Achievement	Achievement
Beneficiaries	150,000	16,000	10.6%
Sales price for Cassava	Le864/kg	Le500/kg	57.8%
Sales price for Rice	Le2,072/kg	1,200/kg	57.9%
Sales price for Cocoa	Le5,888/kg	Le10,000/kg	169.8%

84. Using the same analysis as for indicator 1, this will result in moderately unsatisfactory with a rating of 3 for this indicator. The rating for the pre-restructuring phase, taking cognizance of the above analysis for the 2 PDO indicators is Moderately Unsatisfactory. Please note however that this analysis has not factored the disbursement ratio which will be used to assess the overall outcome. (see annex 10 for details).

85. For the **post-restructuring achievement of PDO,** the assessment is carried out for 3 indicators as identified at 2011 AF as follows:

(i) **Indicator 1**: *50 percent of targeted beneficiaries achieve 20 percent increase in production (interpreted as productivity increase)*

Table 4: Post-restructuring assessment of Productivity objective

	Target	Achievement	Achievement
Beneficiaries	25,000	56,000	224%
Productivity of Cassava	12 tons/ha	12.34 tons/ha	103%
Productivity of Rice	0.88 tons/ha	2.05 tons/ha	233%
Productivity of Cocoa	0.5 tons/ha	0.98 tons/ha	196%

Of the 50,000 beneficiaries targeted, 50 percent or 25,000 needed to increase productivity by 20 percent. At end of project, the number of beneficiaries was surpassed and the productivity targets were fully achieved for the selected value chains. This is rated **satisfactory** with a rating of 5 (see annex 10 for details).

(ii) ***Indicator 2**: 50 percent of targeted beneficiaries achieve a 10 percent increase in sales (interpreted as sale price)*

The share of beneficiaries should also be at least 50 percent (i.e. 25,000) that must achieve this 10 percent sales increase. From the table below, we have more than double the expected number of beneficiaries achieving the targets. The target was therefore fully achieved and rated satisfactory with a numerical rating of 5.

Table 5: Post-restructuring assessment of Sales objective

	Target	Achievement	Achievement
Beneficiaries	25,000	56,000	224%
Sales price for Cassava	Le 605/kg	Le 772/kg	128%
Sales price for Rice	Le 1,452/kg	Le 2,176/kg	150%
Sales price for Cocoa	Le4,125/kg	Le8,281/kg	201%

(iii) ***Indicator 3**: Number of project Beneficiaries; Direct and Indirect*

The target of the project at AF is 50,000 as direct beneficiaries and 200,000 as indirectly beneficiaries. Actual achievement: 56,000 direct beneficiaries and 213,000 indirect beneficiaries. This is satisfactory and have a rating of 5. Furthermore, the project gave a target of 40% women as direct and indirect beneficiaries. This translates to a target of 20,000 and 80,000 women respectively. The achievement was 26,320 (132%) and 92,655 (116%). This is also satisfactory.

Overall, for numeric ease, and assuming that all three indicators have the same weight, we have an average rating of 5 (Satisfactory) for the achievement of objectives post restructuring.

86. Given the above analysis for both pre and post –restructuring assessment of the PDO and using the disbursement ratio of the project as weight which is 41:59 for the pre and post

restructuring phase respectively the weighted average rating for PDO achievement turns out to be 4.05. This score relates to a Substantial performance rating for PDO (4.05 divided by 6 = 0.68 which when multiplied by 4 – four point scale (Low-Modest-Subs-High) for PDO – gives us a score of 2.7 out of 4, which corresponds to Substantial rating for PDO) (please see annex 10 for more detail). Therefore the PDO achievement is rated as **Substantial.**

Achievement of objectives from the Impact Evaluation report

87. An independent impact evaluation of the RPSDP was conducted in December 2015 to assess the impact of the project in relation to its objectives.[5] The project achieved production increases in rice (averaging 2.05mt/ha) and cassava (averaging about 12.34mt/ha); increases in real farm gate prices received by project beneficiaries for cassava, rice and cocoa all exceeded project targets (which was 10% increment) by 54.5 percent, 81.4 percent, and 100.8 percent for the respective crops. This can be attributed to support provided through processing facilities as well as better roads linking producers to markets. The project reached 56,000 direct beneficiaries as against a project target of 50,000; of which 47 percent are female (see Table 6). The independent impact evaluation confirmed that the project largely achieved the key outcomes and exceeded most of the targets.

Table 6: Summary of achievement of the key performance indicators

PDO Level Results Indicators	**UOM[1]**	**End Project Target**	**Achievment at end of Project**	**% Achieved**
1. 50% of target beneficiaries for the selected value chain increase their	Tons/ha	**Cassava** : 12mt/ha	12.34 mt/ha	103%
	Tons/ha	**Rice** : 0.88mt/ha	2.05 mt/ha	233%
2. 50% of target beneficiaries for the selected value chain increase their sales by at least 10% by the end of the	Price/Kg	**Cassava :** Le 605/Kg;	772.44 /kg	128%
	Price/Kg	**Rice :** Le 1452/Kg;	2,176.35 /kg	150%
	Price/Kg	**Cocoa :** Le 4125/Kg	8,281.44 /kg	201%
Beneficiaries				
3. Number of project beneficiaries, direct/indirect		Direct : 50,000;	**56,000**	112%
	Number	Indirect : 200,000	213,000	107%
Of which female (40% beneficiaries)	Number	Direct : 20,000;	21,620	108%
		Indirect : 80,000	92,655	116%

Source: Project Impact Evaluation, 2015

88. ***Production and sale levels of targeted commodities***
The results framework projected an increase in production by 20 percent of at least 50 percent of beneficiaries in supported crops by the end of the project. The project exceeded the target in all crops as shown in the table below. Cassava estimated average yield increased from 12 mt/ha to 12.34 mt/ha (an increase of about 3.4 percent over the period of the project; rice yield increased on average from 0.88 mt/ha to 2.05 mt/ha (an increase of about 133% over the project period).

[5] Seray Consulting Associates: "Final Report: Impact Evaluation", December,2015

Table 7: Estimated Production and yield level of crops by project beneficiaries

Crops	RPSDP Baseline Year (2008)	Estimated Yield end of project (2015)	
			% change compared to target
Cassava (mt/ha)	12.00	12.34	3.4%
Rice (mt/ha)	0.88	2.05	133%
Vegetables (baskets)	5.59	4.78	-19.7%
Cocoa (70-kg bag)	2	10.38	419%

89. The average production of vegetables reduced by 19.7 percent at the end of the project compared to the baseline. This is attributed to the quarantines and associated travel restrictions to and from the main vegetable production area (i.e. mainly Kabala in Koinadugu) which affected the total vegetable production in 2015 compared to the baseline estimate. However, estimated sales for cocoa improved significantly as a result of the project interventions. Average cocoa exports per household increased from 2 to over 10 bags of 70kg (dry weight of cocoa beans) over the five year period (2010-2015).[6] By the end of the project, a cumulative total of 2,600 mt of cocoa were exported – and the export volumes steadily increased annually from less than 150 mt in 2011 to over 720 mt in 2014. The increased export volumes were both a result of increase in yield (due to technical change resulting from the improved planting materials provided for the rehabilitation of the cocoa plantations) and the increase in the area under cocoa with over 1,450 ha made possible through the project intervention. Approximately one million seven hundred and twenty thousand (1,720,000) all year round seedlings were raised and distributed to farmers. The project also facilitated the formation of the cooperative owned Kayeigorma Cocoa Company which provided export facilitation to the farmers.

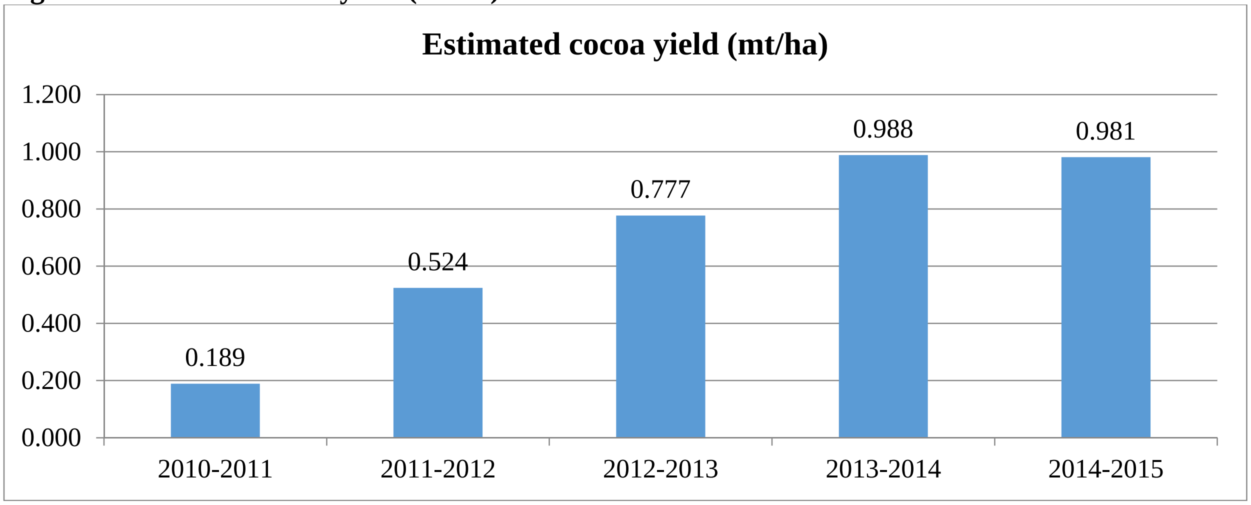
Table 8: Trend in the production and export of cocoa

Table 8(a): Cocoa exports (mt) by cooperative (2010 -2015)

[redacted]					
Kasiyatama Kono-District	35.47	92.15	126.60	209.83	261.2
Munafa Kenema District	53.77	139.92	205.54	262.92	276.4
Tegloma Kailahun District	51.08	156.90	244.90	260.96	190.7
Totals	**140.32**	**388.97**	**577.04**	**733.71**	**728.3**

[6] At the end of the project, total membership for the three original cocoa cooperatives was 10,072 farmers, of which 7,697 were male and 2,375 were female.

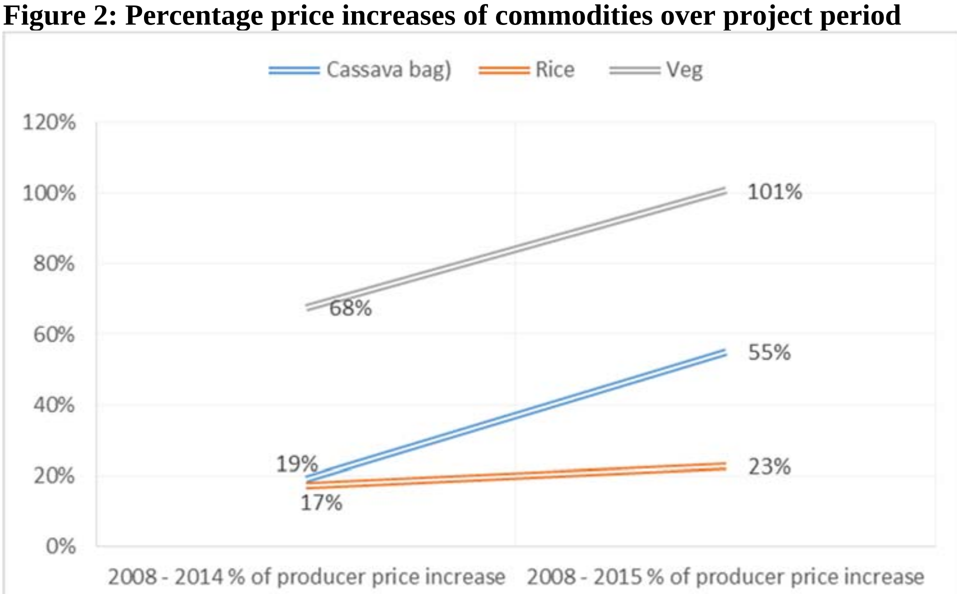
Figure 1: Cocoa estimated yield (mt/ha)



Source: Project M&E Records; confirmed with export records from Kayeogorma Cocoa company

90. As stipulated in the results framework of the project, the shift from farmers selling at farm gate prices to selling at producer prices was to increase prices that farmers received by 10 percent. Evidence, as shown in Figure 2, suggests that commodity prices (in real terms) by far exceeded the target. Cassava prices increased by 19 percent over the baseline figure and reached 55 percent in 2015. The large jump in prices may be attributed in part to better access to markets as a result of rehabilitated roads as well as to the provision of marketing infrastructure. It may also be partly due to exogenous factors, including but not limited to, increased competition among traders given the improved road conditions, scarcity of food during the outbreak of the Ebola pandemic in 2014/2015, and other interventions which may have improved cost efficiency among farmers and traders. It is not possible to attribute the increase in real commodity prices only to the project interventions

Figure 2: Percentage price increases of commodities over project period



91. As a result of the higher real producer prices, the project contributed to an increase in income from sales earned from the supported commodities. Most of the income gains are far above the target of 10 percent. The highest recorded sales were among cassava cocoa farmers. For cassava, this is mainly due to an increase in the price and production volumes while for cocoa, it is due to an

increase in export volumes, as well as higher price of cocoa as a result of fair-trade certification which attracted a premium price (above the international market price). The details of the income gains are presented in Table 9.

Table 9: Percentage increase of market value of commodities

Crops	**Market value of prod. Per ben. at baseline year (2008)**	**2014 market value of prod. per beneficiary**		**2015 market value of prod. per beneficiary Le**	
	Le	**Le**	**%**	**Le**	**%**
Cassava	183,938.88	657,687.28	258%	736,851.23	301%
Rice	877,627.02	1,543,964.93	76%	1,511,240.93	72%
Veg	335,400.00	674,335.29	101%	576,299.03	72%
Cocoa	1,181,787.86	7,632,172.25		5,407,892.31	

Source: Project Impact Evaluation, 2015; Project M&E Records for the cocoa export values.

3.3 Efficiency

92. The end of project estimates for the Economic Rate of Return (ERR) show that the project is still economically viable with positive returns (estimated Net Present Value (NPV) of US$ 5.43 million with an economic rate of return (ERR) of 21.8 percent. However, the estimated returns are somewhat lower than the appraisal estimate mainly because these returns only accrue from the sale of rice, cassava and cocoa.[7] The project did not support palm oil investment as originally planned at appraisal.[8] The analysis is mostly based on the discounted net benefits accruing from sales of rice, cassava and cocoa. The economic returns are highly sensitive to the productivity changes and the discount rate.

	Appraisal estimate	End of project estimate
NPV (US$ million)	--	5.43
ERR (%)	34%	21.8%

Key assumptions for the end of project ERR estimates are highlighted in Annex 3.

93. Given that the project substantial project resources were used to rehabilitate feeder roads in order to improve market access, a cost-effectiveness analysis was undertaken to estimate the cost of rehabilitating feeder roads under the project relative to other feeder roads projects implemented in Sierra Leone. The cost effectiveness ratio (the cost per km) for RPSDP rehabilitated rural feeder roads is estimated to be slightly higher than similar projects supported by the African Development Bank (AfDB). However, the RPSDP's cost effectiveness ratio does not only cover the cost of feeder roads rehabilitation, but also includes the cost of spot improvements and other rural access infrastructure such as culverts and bridges. This implies that the actual cost for feeder roads rehabilitation may be lower than estimated.

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[7] *For rice, this assumes upland rice because the project did not support any interventions in the in-land valley swamps where rice is grown under irrigation. It should also be noted that for all commodities farmers sold semi-processed commodities (i.e. milled rice, gari from cassava, and well processed cocoa) as a result of the processing equipment and training provided through the project.*

[8] Palm oil production could not be supported because of Round-Table for Sustainable Production of Palm Oil (RSPO) issues as Sierra Leone had not finalized the process of the national interpretation for the implementation of the international guidelines for sustainable palm oil production by the time the project became effective.

Table 10: Summary of cost-effectiveness of feeder roads rehabilitation

	Appraisal estimate (US$ Million)	Km rehabilitated	Cost effectiveness ratio	Cost effectiveness ratio estimated by AfDB study
Phase I (includes structures)	12.94	464.0	27,887.93	--
Phase II (includes structures)	12.8	507.9	25,201.81	--
Total	25.74	971.9	26,484.21	
Of which about 60% was for actual rehabilitation works	15.44	971.9	15,891.00	12,800.00

Source: Project M&E Records; for other projects, the data is quoted from the Study on Road Infrastructure Costs: analysis of unit costs and cost overruns in road infrastructure in Africa, African Development Bank, May 2014. This is the unit cost for re-gravelling of unpaved feeder roads.

94. Based on the estimated economic rate of return at the end of project implementation, the project remains economically viable and should have considerable impact on the targeted households. This analysis is based on interventions on which objective data is available. It is likely that the social return for the project is much higher than can be empirically demonstrable. The sensitivity of the project returns to key variables used for the analysis also shows that the economic rate of return is still attainable within a given range of these selected variables. It also remains in the positive range even with higher discount rates. The cost effectiveness ratio (the cost per km) for RPSDP rehabilitated rural feeder roads is estimated to be slightly higher but still comparable with unit costs for other feeder roads rehabilitation projects in Africa (as estimated through a comprehensive study undertaken by African Development Bank in 2014). As such, with positive rate of return and a cost-effectiveness ratio which is comparable with other similar projects in the region, overall project efficiency is considered to be **substantial.**

3.4 Justification of Overall Outcome Rating

Rating: Moderately Satisfactory

95. The project is still relevant to the rural development and agricultural growth of the country. The relevance of the design, implementation is **modest** and the achievement of the objectives is considered **substantial** based on evidence from impact evaluation report and the split rating analysis carried out on the outcome of the project. The project has many satisfactory achievements to its credit especially post restructuring period with all key outcome indicators exceeded. For example, and as indicated, the average cassava yield for over 50 percent of the beneficiaries estimated at an average of 12.34 Mt/ha (compared to the end of project target of 12mt/ha); rice yield estimated at an average of 2.05mt/ha, over 100 percent above the end of project target of 0.88mt/ha). Furthermore, average real farm-gate prices received by over 50 percent of the project beneficiaries for cassava, rice and cocoa sales exceeded project target of 10 percent by more than 54.49 percent, 81.36 percent, and 100.76 percent, respectively and the number of direct project beneficiaries was 56,000 (of which 47% are female) against the end of project target of 50,000.

96. The efficiency is also rated **substantial** based on the discounted net benefits and comparison of outcome with baseline expectation. Therefore, the overall outcome rating is adjudged **moderately satisfactory**.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

97. ***Poverty Impacts*.** The project contributed to improving livelihoods and reducing poverty levels amongst beneficiaries. According to results observed when independent survey data was compared to baseline conditions, about 45 percent of beneficiaries categorized as poor at baseline have improved their income considerably. The average income per annum among beneficiaries before project, was estimated at US$332 (US$0.91 per day) which was below the poverty line of US$1.25 per day. At project closing, the average income level of the beneficiaries has increased to US$602.29 per annum (US$1.65 per day). The expenditure pattern of household also indicated an increase especially for non-food items. The number of rooms being habited by household is also a function of the wellbeing which is, all things being equal, a translation of the income earned. At project closure, about 7.2 percent of the household sleep in seven rooms whilst 22 percent of the same category sleep in 5 rooms. Less than 10 percent of the beneficiaries sleep in 1 room compared with baseline which shows over 50 percent of the beneficiaries living in poor condition and housing of 1 bedroom.

98. ***Gender Aspects***. The project created a considerable impact on female members in terms of their participation in the program. Access to FBO processing facilities has allowed women to engage in profitable agricultural activities and inculcated an entrepreneurial culture among them. A high percentage of women (47% against a project target of 40%) had taken up decision making roles in various committees of the FBOs. Their active participation in the project has led to increased confidence levels in promoting unity and being instrumental in the resolution of conflicts and gender-based violence in their communities.

99. ***Social Development***. The project's targeting mechanism was considered to be effective. The independent impact survey found that all categories of stakeholders were included in the project activities especially the resource poor farmers. Most of these poor farmers were able to occupy decision making positions in FBOs and served in DICs of the LCs. The RPSDP covered over 95 chiefdoms out of the total of 152 chiefdoms in Sierra Leone i.e. 62.5 percent of the chiefdoms. The total population of these chiefdoms is 3,356,970, and cover all the 13 districts. Beneficiaries consist of farmers, - predominantly those producing cassava, rice and cocoa – traders and people living along corridor of the link roads. The project provided diverse support to these farmers and other agricultural value chain actors which include smallholder farmers, farmer groups and institutional levels. The groups include farmer-based organizations (FBOs), Traders' Associations and Export Associations. Other key partners include, the Local Councils, Sierra Leone Investment and Export Promotion Agency (SLIEPA), Sierra Leone Standards Bureau, Sierra Leone Agricultural Research Institute (SLARI), Njala University, the National Farmers' Association of Sierra Leone(NAFSL) and the Ministry of Agriculture and Food Security(MAFFS), Trade and Industry(MoTI) and the Ministry of Local Government and Rural Development(MLGRD). This ensures inclusiveness in the implementation

arrangement and give voice to the resource poor farmers to negotiate with government agencies and traders.

(b) Institutional Change/Strengthening

100. The project has strengthened and resourced the FBOs by providing capacity building training and provision of processing facilities to enable them add value to commodities Specifically it contributed to increasing the leadership and financial management skills of women and youth. FBOs and their cooperatives have also been linked to the P4P programme of WFP. Capacity of government staff and the LG officers was strengthened through more than 380 training programs undertaken on a range of relevant topics including procurement, social audit, and infrastructure development. The placement of Project Facilitators at District and LC level had also made important inroads towards enhancing participation of LC in various programs and interaction with communities.

101. As part of the sustainability agenda, the project initiated the formation of one rice and three cassava cooperatives. It also assisted to strengthen a number of complimentary institutions in Sierra Leone. The project supported the Sierra Leone Standards Bureau (SLSB) to modernize the national Food safety System based on international norms and standards. As a result of the support provided by the project, the Bureau adopted the International Organization for Standardization (ISO) and International Electro-technical Commission (IEC) directives, Guide 21:2005 to develop 66 priority national standards mainly agricultural, industrial products, metrology and quality management systems standards to ensure free flow of trade in as predictable and freely as possible.

102. The project also supported the institutional reform of the then Commodity Marketing Monitoring Unit (CMMU), which is now the Produce Monitoring Board (PMB). The project supported the development of policy and strategic plan, and a review of the legal instrument which created the CMMU. This support led to the enactment of a new law that gave birth to the PMB. The Sierra Leone Investment and Export Promotion Agency (SLIEPA) was also assisted to establish and operate the Trade Information Centre (TIC), an online information system which provides information on customs regulations and export procedures. The support for the institutional and governance reform of the National Federation of Farmers in Sierra Leone (NaFFSL) led to the review of their constitution and the development of a strategic plan. The Sierra Leone Roads Authority (SLRA) was also co-opted to provide technical support in the rehabilitation of the feeder roads.

(c) Other Unintended Outcomes and Impacts (positive or negative)

103. RPSDP has made a lot of investment in processing of commodities. This is reflected in the proportion of farm outputs that are processed by beneficiaries of RPSDP. Though designed to serve FBO members, the processing facilities are providing significant services for non-FBO members in project communities and it is generating enough surplus in many communities to ensure maintenance of the assets. There is also tremendous improvement in processing capacity and quality at the local level. This has created jobs and employment for many people in the rural areas.

104. Although intangible and difficult to quantify, there is a palpable difference in self-respect and confidence in many communities within the project zone The FBOs established under the project have improved internal re-engineering in the communities and have also engendered healthy competition among groups and communities for efficiency and effectiveness of subproject execution. With capacity building and access to inputs, the FBOs now participate actively in project management, monitoring and evaluation. In all communities, several committees have been developed and are operational.

105. The Ebola (EVD) outbreak in 2014 slowed down implementation and it is important to note that the onset of the Ebola epidemic created serious implementation challenges as contractors, engineers and project/government staff could not access project sites for extended periods due to national state of emergency. A total of 52.1 km of road could not be completed as planned.

3.6. Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

The RPSDP commissioned a beneficiary impact assessment (BIA) study, in order to assess beneficiary perceptions of impact and satisfaction levels of the various components of the project. In all, 184 communities in 13 districts benefitted from the project.

106. *Rural Market Information System*: All the districts surveyed have established systems that capture weekly market prices of crops at the market levels and also disseminate the information on availability of such crops at the level of farmers. However, most of the beneficiary farmers interviewed receive their pricing information from other sources, particularly local traders - 39 percent. Eleven percent indicated they quote prices provided by the FBOs stores. Although the RPSDP rural market information system has made little impact on commodity pricing determination, only 6 percent of beneficiary farmers are not satisfied with the sources of information as it gave them bargaining power over traders.

107. *Export Promotion*: The project established three cocoa cooperatives in Kailahun, Kenema and Kono with a total membership of 12,688 (made up of 10,256 males and 2,432 females). The Cooperatives have exported a cumulative total of 2,600 Mt of Grade 1 cocoa since 2011; export volume for the 2014 trading season was 733 Mt. The farmers rated their production level as very good, good or fair with majority (40%) of them rating it as good. They also expressed satisfaction with the impact of the RPSDP on their production. Half (50%) of them were “satisfied”, 40 percent were either “very satisfied” or “very much satisfied”. All the farmers who expressed satisfaction attributed their satisfaction to increase in income from cocoa sales.

108. *Support to Farmer-Based Organizations*: The survey also captured the performance of the executives of the FBOs. Members indicated the performance of their executives as ‘very good’ – 65 percent -, and were ‘very much satisfied’ with their performance. Nevertheless, 6 percent of members were not satisfied with the performance of their executives. Satisfaction level expressed by members focused on leadership: 78 percent of those who expressed ‘’very much satisfied” and 33 percent of ‘’unsatisfied’’ members.

109. Most members of the FBOs patronise the facilities provided by RPSDP. The survey revealed that 71 percent of members interviewed patronise the facilities. In addition, 76 percent of them consider the operation of the facilities as either “very good” or “good” while 86 percent of them are either “very much satisfied”, “very satisfied” or “satisfied”.

Ninety-eight per cent of respondents who are "very much satisfied", 89 percent of those who are "very satisfied" and 64 percent of those who are "satisfied" with the facilities attribute their satisfaction to the quality of the processed produce. Similarly, 67 percent of those who are "unsatisfied" and 43 percent of those who are "very unsatisfied" attribute their dissatisfaction also to quality.

110. *FBO governance arrangement and participation in collective decision making:* The survey disclosed that 39 percent of FBO members and non-FBO members in project communities have participated both in FBO and RPSDP activities. Forty-seven percent indicated they were involved in the construction of an FBO facility while 31 percent were involved in the process of forming an FBO. On the average, about 45 percent of members of FBOs are active. The executives also revealed that 77 percent of members attend meetings regularly while 88 percent of them pay their dues regularly. Thirty-five percent of the FBOs surveyed have all their members fully paying their dues. The respondents are impressed with the level of community participation in the activities of the FBOs and RPSDP at the community level. Sixty-five percent of them are of the view that community participation is "very good" while 84 percent are either "very much satisfied" or "very satisfied" with the level of community participation.

4. Assessment of Risk to Development Outcome
Rating: Significant

111. The risk that achievement of the development outcomes will not be sustained are considered significant. The main risks to project sustainability stem mainly from the following:

- Some processing facilities constructed under RPSDP are quite complex and need sound management and technical capacities for effective operation and maintenance. A case in point is the vegetable cool room constructed for Koinadugu Women's Vegetable Farmers' Cooperative. The vegetable preservation is delicate process that needs technical attention. The management and maintenance of these facilities are left in the hands of the FBOs. It will be essential to outsource operation and management to competent private entities under a contract management arrangement while the FBO maintain full ownership of the facility (assets owners).
- Road deterioration due to lack of maintenance has become a major issue for the project. It is accepted fact that rains and other factors reduce the life span of roads without maintenance activities. Some of the rehabilitated roads will revert back to the old status because of lack of maintenance. It is obvious that the existing District Councils road maintenance structure will not be able to provide the required investment and urgency to prolong the life span of these rural roads. Unfortunately, the FBOs and community members were not involved in the design and implementation of these roads and therefore could not be part of maintenance team. The maintenance and up-keeping of the markets established is also a challenge. Though the supervision team recommended that funds should be provided for LCs and that LC should establish a committee to manage these, it poses a significant risk for sustainability.
- Although laudable, the marketing information system set up by the project is not reaching its audience. In fact, only few beneficiaries have access and are utilizing the information. Some don't even see it as a preferred source. Further diagnosis could be conducted to verified and investigate inability of current RMIS is not getting to the RPSDP beneficiaries and other value chain actors. Those could help in re-strategizing and revamping the current modus-operandi of the RMIS. A

rigorous and targeted medium of sending messages could be also tested and adopted – i.e. Integration of participatory radio education with direct extension service system.

- The FBOs were registered with the MAFFS and a select few registered as cooperative. The project relies heavily on the growth patterns of the FBOs as community organisations linking farmers to formal institutional structures for sustainability. It is therefore critical that the role of FBOs as continual knowledge transfer mediums as well as organisational structures is enhanced. Most of the FBOs are in their initial growth trajectory. The ultimate goal for the FBOs is to make them agents of change and transformation. Essentially, achieving this will require a comprehensive and continuous capacity building programme (in report writing, monitoring, leadership and group organization and records management, book keeping and cooperative principles among others). The FBOs were not linked with any agency or relevant structures at national or international level for sustainability. The institutional capacity of the FBOs is currently low and there are doubts if it can continue post-project to deliver services for its members as planned.
- *Risk of Ebola* virus outbreak is rated substantial. The outbreak of Ebola, which impacted the project toward the end, has been contained successfully. Given the devastating nature of the virus, mutation, flare ups and re-emergence of the disease could occur which will affect project structures which are not yet stable especially in the rural areas.
- Lack of coordination among the implementing agencies was a major setback for the project. Though after restructuring, MAFFS was made the lead agency, it reduced the enthusiasm and participation of MoTI. The low performance of the Local Councils also did not enhance operational effectiveness of the project. Almost all the LCs were not able to raise counterpart funding of 10 percent to support the construction of link roads and market infrastructure as well as providing funding for maintenance works. The District Implementation Committees (DIC) at the LC levels were also not functioning as expected. In most Districts the PCU and District Technical Teams of the RPSDP had to intervene to perform the functions of these LC level units.
- The contractual arrangements between buyers and sellers facilitated by the project are often not written and signed by both parties. Enforcing and respecting such mutual agreements will be a challenge after the project closing when there is no further matching grants that serve as stimulus for such bargains.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Unsatisfactory

112. The Bank's performance in the identification, preparation, and appraisal of the project was moderately satisfactory. The project was well conceived and responded to the pertinent issues in the immediate post-conflict era of Sierra Leone. During preparation and appraisal, the Bank took into account the adequacy of project design and all major relevant aspects, such as technical, financial, economic, and institutional, including procurement and financial management. Several alternatives were considered for the project design. In addition, major risk factors and lessons learned from past projects as well as international and regional experiences in rural sector were considered and incorporated into the project design.

113. Project preparation was carried out with an adequate number of specialists who provided the technical skill mix necessary to address sector concerns and a good project design. The Bank provided adequate resources in terms of staff weeks and funds to ensure quality preparation and appraisal work. The project was also consistent with the CAS and government priorities in the sector at the time. The Bank had a consistently good working relationship with the Borrower during preparation and appraisal. A major faulty aspect of the design however was the overestimation of the commitments and overlooking the risks of the coordinating abilities of MAFFS and MoTI. This delayed project implementation by more than ten months. Furthermore, much emphasis was placed on road rehabilitation in terms of fund allocation at the expense of increasing production which was one of the major focus of the PDO. Also the PDO and the related indicators at design stage were not specific and produced an initial M&E system that was not functional.

(b) Quality of Supervision
Rating: Moderately Satisfactory

114. The Bank allocated sufficient budget and staff resources, and the project was adequately supervised and closely monitored. The team organized no fewer than 10 implementation support missions consisting of up to three in some years. In addition, supervision was supported through intensive agribusiness sector focused missions by specialists on the team. The task team regularly prepared Aide-Memoires, alerted the government and MAFFS about issues found during project execution and facilitated prompt corrective action. There were only three TTLs during the life cycle of the project but adequate attention was paid to the PDO of the project and the supervision approach was uniform. The project mid-term review was conducted appropriately and one major restructuring was carried out. At each stage and based on implementation reality, the changes in selected value chains, addition of activities, inclusion of implementing agencies and institutions, and action plan in response to Ebola were carried out.

(c) Justification of Rating for Overall Bank Performance
Rating: Moderately Satisfactory

115. Though the project was relevant and appropriate, adequate attention was not paid at the design stage to some critical areas that eventually affected the delivery of project outcomes. The PDO was not well structured and indicators were not SMART. The disproportionate funding of the project with bias for road rehabilitation and other infrastructure reduced attention towards removing binding constraints on smallholder production and marketing. Also, no mitigation was proffered for the observed weak coordination capacity of the implementing agencies. However, during implementation, the Bank team paid great attention to the quality of project supervision and made each time appropriate recommendations to improve implementation. The mid-term review was also carried out to take sound decisions on particular activities. Supervision of the project from the field contributed to a hands-on approach and rapid problem solving. Project team was pro- active and prepared ISR regularly highlighting implementation issues and preparing action plan to address them which were well monitored. With a moderately satisfactory rating for quality at entry and Satisfactory for quality of supervision, overall Bank performance is rated as Moderately Satisfactory.

5.2 Borrower Performance

(a) Government Performance

Rating: Moderately Unsatisfactory

116. The government's full support and commitment for the project was one of the major decisive element of the project's success. There was a high level of ownership on the part of the government of Sierra Leone during the preparation phase of the project. The Government was very active and committed during this critical stage and did everything needed to prepare the different components of the project. The Government made available resources for the project teams from various agencies to participate actively in designing and preparing the project throughout the preparation period. During implementation however, there was lack of coordination among the agencies. The project had delayed effectiveness and the core staff of the PCU were not recruited for almost 18 months after effectiveness. Furthermore, the support from LCs was not uniform, and most of them did not provide the project with timely counterpart contribution, which delayed implementation of some development activities. Later on during implementation, the government became very active in following up recommendation and taking policy reform decisions though enthusiasm of MoTI on the project waned. Recommendations by WB missions were carried out and the government was also pro- active in replacing staff that resigned and also providing support for the recruitment of a Fund's Manager. The government also fulfilled all its obligations towards the project and complied with all covenants and provided the national counterpart contribution. Government performance is therefore rated as Moderately Satisfactory.

(b) Implementing Agency or Agencies Performance Rating: Moderately Satisfactory

117. Overall, the PCU had dedicated and qualified staff who collaborated with the Bank team and carried out most aspects of project management in compliance with Bank procedures and guidelines despite the initial challenges in achieving the required staffing levels due to capacity issues. Fiduciary ratings were satisfactory despite the complex nature of the project and level of risk exposure involving multiple transactions and layers of agencies. PCU also carried out and supported a lot of studies to enhance project implementation. The major studies included: the Development of Benefit Sharing Scheme for FBOs; a Beneficiary Impact Assessment (BIA), a Rice Processing, Marketing and Distribution study and an independent impact evaluation study of the project as a critical input towards the preparation of the Project Completion Report. Staff that left the project were also promptly replaced and the PCU had a full complement of staff at closing. At the District level, the project appointed a set of District and Ward facilitators that were dedicated and committed to the project. They work with the beneficiaries and live in the District and the local councils.

(c) Justification of Rating for Overall Borrower Performance
Rating: Moderately Satisfactory

118. Both the commitment and the performance of the Borrower were substantial for the project at the preparatory stage of the project. During implementations however, there were many bureaucratic delays. Most critical decisions often have to wait for approval of the Minister of Agriculture. Despite high handedness which did not allow quick decisions by the PCU, there was compliance with all legal covenants, fiduciary and safeguards. Few outstanding deficiencies (unequal support from the LCs and lack of effective coordination among implementing agencies) prevented the ICR mission from rating the performance of the Borrower higher. The Overall Borrower Performance is therefore rated as Moderately Satisfactory.

6. Lessons Learned

119. The project went through a difficult implementation period but has emerged with important lessons that could potentially inform the future design of similar operations in the country and elsewhere.

i. One key lesson from RPSDP is that significant production related constraints affect the utilization of the processing equipment and therefore limit the achievement of significant income gains, particularly for the staple commodities (rice and cassava). Furthermore, focusing on post-harvest and market support alone is less effective where significant production constraints persist.

ii. Maintenance should begin on the first day after the road improvement works are completed. The problems of feeder road maintenance are not uniquely related to finance. There are technical issues related to the lack of planning and the lack of information on the state of the road network. For sustained maintenance of these roads there are measures that need to be instituted within the project implementation framework. The focus of construction of link roads should be based on community approaches where beneficiaries who opt for roads should lead the process of using local internal resources and labour with funding and support from the project to connect to higher order road. This will ensure ownership and guarantee maintenance. Also the local government should be in the picture from the beginning.

iii. One of missing elements along the value chain of the commodities is inadequate investment, and in some instance, absence in intervention in the production process. Access to credit was a major problem for expanding and intensifying food crop production. In future, a project of this nature, especially in areas where there are agro-input dealers within catchment, tractor service providers and aggregators (local and urban traders), should incorporate a plan to meet the financial needs of farmers. This could be channelled through the provision of funds to other value chain actors on a seasonal basis – aggregators, input dealers, tractor service providers etc.

iv. Given the complexity and multi sectoral nature of the project, it will be appropriate for the project design to maintain synergy with other donors' program or seek co-financing for some of the activities that will lead to sustainability of the benefits.

v. In a project of this nature, the leading agency should be identified at the design stage and given the mandate and responsibility to lead project activities. The lack of Coordination among implementing institutions presented a significant delay for the project, particularly at the beginning of the project implementation. When it was eventually resolved, it dampened the enthusiasm of a co-lead agency.

vi. One of the main take away of the project is that value chain development which is inclusive to stakeholders requires a more comprehensive approach. This approach should address all parts of the targeted value chains by expanding investments in production, post-harvest (including processing), and marketing/supply to buyer and improving service delivery in parallel. As such, identifying investment models that are specific to existing business/market opportunities should be part of the design.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

No issues were raised by the Borrower on the ICRR. The only comment that came from government was in form of a letter from the Permanent Secretary of the Ministry of Local Government and Rural Development. It is attached below.

<u>SUBJECT: SUBMISSION OF THE DRAFT IMPLEMENTATION COMPLETION REPORT FOR THE RURAL AND PRIVATE SECTOR DEVELOPMENT PROJECT (RPSDP)</u>

I am directed to refer to the above subject and to state that having thoroughly digested the completion report, on behalf of the Ministry of Local Government and Rural Development (MLGRD), I will not hesitate to say that RPSDP was indeed a huge success. It was a unique project. Unique in the sense, its implementation experienced the involvement of all relevant stakeholders.

However, this is not to say that it was a total smooth sail. Obviously, there were challenges; but from the lessons learned from the previous RPSDP, and with the measures put in place to consciously avoid those challenges while implementing **SCADeP,** for us in the MLGRD, the situation is going to be like **a new dawn.**

From the foregoing, I must confess here that the Ministry of Local Government and Rural Development is very pleased with the overall progress made by RPSDP.

Your usual cooperation is highly solicited.

Thank you.

Michael A. Samai
For: Senior Permanent Secretary

(b) Cofinanciers

(c) Other partners and stakeholders
(e.g. NGOs/private sector/civil society)

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in US$ Million equivalent) - IDA Grant No. H2900-SL

Components	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
Domestic Market Improvement	12.632	12.94	102.4%
Agricultural Export Promotion	8.11	6.55	80.8%
Support to Farmer Based Organizations	7.34	5.86	79.8%
Policy Regulation, Project Management, Monitoring and Evaluation	5.392	5.74	106.5%
Total Baseline Cost	33.474	31.09	93.0%
Physical Contingencies	0.00	0.00	0.00
Price Contingencies	1.067	0.00	0.00
Total Project Costs	34.541	31.09	
Front-end fee PPF	0.00	0.00	.00
Front-end fee IBRD	0.00	0.00	.00
Total Financing Required	34.541	31.09	

(b) Project Cost by Component (in US$ Million equivalent) - IDA Grant No. H6970-SL

Components	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
Domestic Market Improvement	11.9	12.80	107.6%
Agricultural Export Promotion	3.5	2.70	77.1%
Support to Farmer Based Organizations	1.8	0.79	43.9%
Policy Regulation, Project Management, Monitoring and Evaluation	2.80	2.90	103.6%
Total Baseline Cost	20.0	19.19	96.0%
Physical Contingencies	0.00	0.00	0.00
Price Contingencies	0.00	0.00	0.00
Total Project Costs	20.0	19.19	
Front-end fee PPF	0.00	0.00	.00
Front-end fee IBRD	0.00	0.00	.00
Total Financing Required	20.0	19.19	

(c) Financing (IDA Grant No. H2900-SL)

Source of Funds	Type of Cofinancing	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
Borrower		0.50	0.46	91.8%
Beneficiary contribution		3.90	0.73	18.8%
IDA Grant		30.00	29.90	99.7%
TOTAL		34.40	31.09	90%

(d) Financing (IDA Grant No. H6970-SL)

Source of Funds	Type of Cofinancing	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
Borrower		0.00	0.00	0.00
Beneficiary contribution		0.00	0.00	0.00
IDA Grant		20.00	19.19	95.9%
TOTAL		20.00	19.19	95.9%

Annex 2. Outputs by Component

(a) Project Outputs: The project outputs are discussed in three of the components as follows.

1. **Component 1: Domestic Marketing Improvement-** The project has supported the domestic supply chain consolidation for specific crops and products. The main sub-components include: (i) rehabilitation of critical feeder road links; (ii) provision of matching grants for rural market infrastructure improvements to address critical infrastructure needs for selected products; and (iii) knowledge management and technical assistance to improve access to market information.

- *Rehabilitation of critical feeder road links*: In all, a total of 971.9 km – 97 percent of the planned target - of link roads was constructed; 62 bridges and 1,643 culverts were constructed in 55 Chiefdoms (estimated 184 communities). The key beneficiaries of the link roads were the individuals living along link road corridors, patrons of markets (i.e. ordinary community residents, traders and farmers within functional areas of the facilities), FBOs, Trade Associations and the Export Associations. In all, approximately 132,404 persons accessed link roads constructed by the project. At the end of the project, 62 bridges and 1643 culverts were constructed. It was estimated that these roads have led to a 53.6 percent reduction in the time it takes to transport goods from communities to the market which exceeds the planned target of 20 percent. However, about 3 percent of feeder roads was not completed due to terminated non-performing contracts. The project provided an ad-hoc maintenance support which was to be sustained by the Local Councils. But this was not effective and the local councils could not provide the necessary funding for maintenance. However, by the time the project was closing, the Government had established the Road Maintenance Fund Administration (RMFA), and mandated that 20 percent of the fund should be for feeder roads, and implemented through the Local Councils.

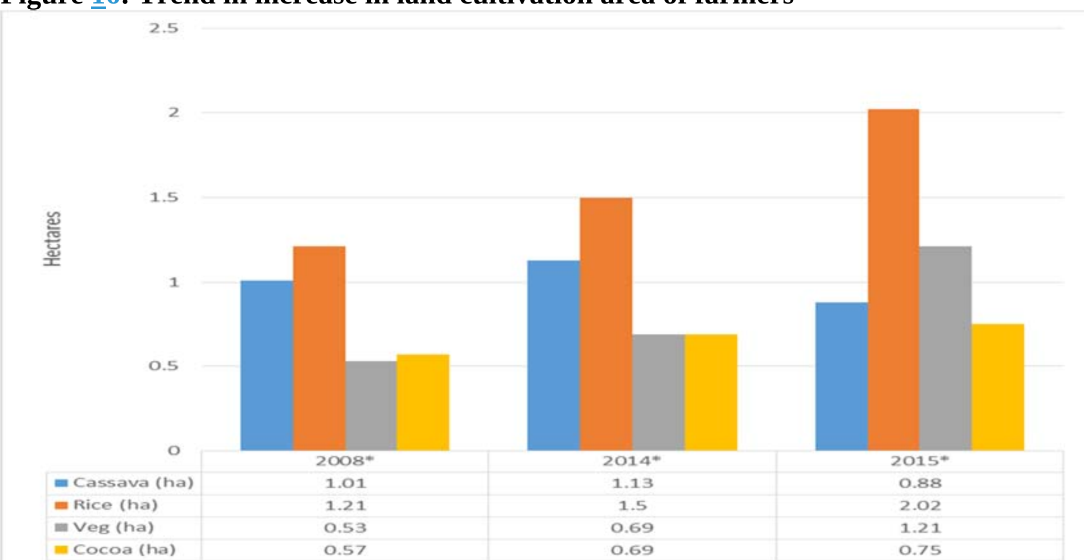
- *Rural Market infrastructure improvements*. The project constructed 21 community markets in the food producing areas. These markets enhanced the prices of farmer products which were hitherto sold at farm gates. Furthermore, the farmers were able to develop agreements with buyers over production cycles. Most of these efforts were fruitful though only about 12 percent of agreements were documented. It was estimated that all the markets service approximately 1,050,360 people throughout the week as most of the markets are weekly markets with market days.

- *Domestic Market Information System:* Beneficiary farmers accessed the pricing of commodities through various mediums. A prominent source of market price information utilized by farmers was information gathered from local traders. These traders control the pricing regime, which is traditionally set up to exploit farmers and pay lower farm gate prices. The project ensured diversified source of price information for the farmers. It provided support to the PEMSD of MAFFS for the Domestic Market Information System (DMIS) through which local market prices for agricultural commodities were aired on a weekly basis in all the 13 districts through community radio programs. The project supported the Sierra Leone Investment and Export Promotion Agency (SLIEPA) to establish and operate the Trade Information Centre (TIC), an online information system which provides information on customs regulations, export procedures, foreign markets and business opportunities, including agribusinesses. All RPSDP districts put in place systems that capture weekly market prices of crops at the market levels and also disseminate the information on availability of such crops at the farmers' levels.

- The project also supported a number of studies to gain better understanding of market potentials of both traditional and non-traditional export commodities and their market conditions within the sub-region. The commodities studied were Gari, Rice, Palm Oil, Palm Kernel Oil and Cashew. The study concluded that the production levels of these commodities were low coupled with weak adherence to quality standards by both farmers and processors. The Sierra Leone Standards Board was subsequently supported to develop Food Safety Standards and Phytosanitary and Pest Control Bills.

2. **Expansion *in land for crop cultivation*:** Under the various project intervention areas, farmers were expected to increase average land size and improve productivity. It was envisaged that land size would increase by 10 percent. The 2015 assessment showed that, on the average, the area of land under cultivation for a given crop per farm family increased from 0.81 ha (2 acres) in 2008 to 1.01 ha (2.5 acres) over the period. This represents an increase of 25 percent above the planned target. Details of cultivated land area for specific crops are provided below (see Figure 6).

Figure 16: Trend in increase in land cultivation area of farmers



Source: Field survey, 2015

3. **Component *2 Agricultural Export Promotion*-** Through this component, the project has interventions which have created the enabling environment for export of agricultural commodities. The SLSB in collaboration with Njala University (NU) have developed standards for about 66 commodities and drafted the Standards Bill, Food safety and phytosanitary policies for parliamentary approval. The project has provided support to the Sierra Leone Investment and Export Promotion Agency (SLIEPA) to carry out a regional market survey with the objective of gaining better knowledge of market conditions, particularly within the West Africa sub-region, as

well as the potential sources of supply of selected commodities in Sierra Leone. SLIEPA has also established a trade information center that provides information to potential exporters.

4. Other efforts to promote the marketing of agricultural produce include linking rice and cocoa producers to buyers with substantial number of producers signing MOUs with the buyers. A comprehensive sub-sector study of the Sierra Leone Cocoa Industry, with the objective of improving the supply and export of the commodity, was carried out. The implementation of the findings of the study led to the establishment of three cocoa cooperatives with a total membership of 12,688 (Male, 10,256; Female, 2,432). A total of 140.2 tons of Grade1 cocoa was exported during the six months of operation of the newly established cocoa cooperatives. An Export Supply Chain study to identify non-traditional export (NTE) and market opportunities has been carried out under this component. The findings of the study revealed the state of readiness of the sector to embark upon the development of NTE commodities.

5. **Component *3: Support to Farmer-Based Organizations and technology Improvement:*** A total of 184 FBOs with 1,861 members across the different commodity areas were strengthened. The FBOs were engaged in the cultivation and/or processing of at least five (5) commodities – Cassava, rice, vegetables, fish and cocoa. The project supported the FBOs to construct 59 cassava processing facilities, 113 rice milling facilities, 3 fishing preservation and 1 vegetable storage facility under the matching grants scheme. Although the processing facilities are co-owned by 1,861 FBO members, they benefit over 146 communities and 28,672 farmers (direct beneficiaries, 1,861; indirect beneficiaries, 28,725). Two community volunteers, or volunteer members of the FBOs, were trained for the operation and maintenance of each processing facility. But due to the low technical capability of the operators, they were unable to carry out routine checks and maintenance on the equipment. The project provided training on procurement, financial and post contract management to the FBOs in all the districts. Although, this is the very first time farmer based organizations in the country were trained to manage assets, most of them did excellently well by managing the assets inclusively in a transparent manner.

6. Additionally, a cocoa-FBO Study was also carried out leading to the setting up of three cocoa cooperatives, which have been legally registered and are now operating fully. The project also supported SLARI to collaborate with farmers in 11 districts to conduct on-farm adaptive trials/participatory variety selection and multiplication of improved varieties in cassava and rice. A total of 275 farmers also received training in best agronomic practices for cassava cultivation and have been provided with improved planting materials for cocoa, rice and cassava which has resulted in exceeding planned targets for the project in terms of production and marketing with higher benefits flowing to the producers.

7. **Policy *Development:*** Project related policies developed were well seated within the institutions that were responsible. The importance of such policies was to influence the policy environment for sustainable improved production of the selected agricultural crops and increased efficiency in marketing along the value chain. Policies for this purpose include: (i) Phytosanitary and Pest Control Bill; (ii) Seed Bill; and (iii) Food Safety Bill and Policy.

Summary of Outputs

Feeder roads rehabilitated

District	Length of roads fully rehabilitated (km)	No. of bridges constructed	No. of culverts constructed
Bo	108	18	207
Bombali	82.7	4	137
Bonthe	52.1	0	136
Kailahun	38	0	43
Kambia	97.4	6	231
Kenema	35.7	7	50
Koinadugu	48.8	1	81
Kono	49	5	55
Moyamba	111.5	2	246
Port Loko	92.9	6	91
Pujehun	93.2	0	76
Tonkolili	88.8	6	193
WARD	73.8	7	97
Total	971.9	62	1643
Total Target	1000	66	1729
% completed	97%	94%	95%

Source: Project M&E Records, 2015

Market infrastructure constructed

Number of Markets constructed by District		
District	**No. of Markets Allocated**	**No. of Markets Completed**
Kenema	2	2
Bonthe	2	2
Kono	2	2
Bombali	1	1
Kailahun	2	2
Koinadugu	2	1
Tonkolili	2	2
Pujehun	2	2

Number of Markets constructed by District		
District	**No. of Markets Allocated**	**No. of Markets Completed**
Bo	2	2
Western Area Rural	1	1
Kambia	1	1
Port Loko	1	1
Moyamba	2	2
Total	**22**	**21**

Number of Rice FBOs supported by district				
		Number of Infrastructure/Equipment Type		
District	**No of Rice FBOs**	**Rice Mill Facility/Store**	**Drying floor**	**Agro Processing Equipment**
Bo	3	3	3	3
Pujehun	1	1	1	1
Moyamba	8	8	8	8
Bonthe	-	-	-	-
Bombali	10	10	10	9
Koinadugu	15	15	15	13
Port Loko	12	12	12	12
Tonkolili	18	18	18	11
Kambia	17	17	17	16
Kenema	7	7	7	7
Kailahun	8	8	7	8
Kono	10	10	10	10
WARD	4	4	4	4
Total	**113**	**113**	**112**	**102**

Cassava infrastructure and equipment					
District	**No of Cassava FBOs**	**Number of Infrastructure/Equipment Type**			
		Store/ Processing Shed	**Hand Pump Well**	**Toilets**	**Agro Processing Equipment**
Bo	10	9	6	6	10
Pujehun	8	8	1	1	8
Moyamba	5	5	4	4	5
Bonthe	9	9	7	7	9
Bombali	4	4	1	1	4
Koinadugu	1	1	1	1	1
Port Loko	4	4	1	1	4
Tonkolili	1	1	1	1	1
Kambia	5	5	-	-	5
Kenema	6	6	4	4	5
Kailahun	3	3	1	1	3
Kono	1	1	-	-	1
WARD	3	3	-	-	3
Total	**60**	**59**	**27**	**27**	**59**

(b). **RPSDP Project Output-Outcome Linkage Matrix**

Outputs	Indicators	Outcomes	Remark
Link Road Construction: 971.9 km – 97 percent of the planned target - of link roads were constructed 62 bridges and 1,643 culverts were constructed	Travel time reduction by 20%	Approximately 184 communities are served with 132, 404 people who have access to market as direct beneficiaries; reduction in travel time; reduction in waiting time by more than half (53.6%); reduction in vehicle operation cost; and increase in traffic volume (see details below)	
Processing Facilities: -59 cassava processing facilities established -3 fishing preservation and processing facilities established -113 rice milling and processing facilities established -1 vegetable storage facility established -184 FBOs with 1,861 members' capacities were strengthened. - Two volunteer FBO members were trained in the operations and management of the facilities.		It is estimated that an average of 23 farmers and traders commute from eight (8) non-project communities clustered around each project community to patronize the processing facilities. It is also estimated that, apart from the 146 project communities, a total of 1,168 communities and about 28,672 people (46% males; 54% females); approximately 1,861 FBO members who are direct beneficiaries of the facilities, with 28,725 indirect beneficiaries. As provided in the Beneficiary Impact Assessment Report (RPSDP, 2014), profitability assessment of 12 facilities were undertaken. The following are the average revenue and expenditure derived from the assessment: - Revenue: Le 2,468,750 - Maintenance Cost: Le 202,750.00 - Spare parts cost: Le 311,666.67 - Operational cost: Le 763,166.67 - Total recurrent cost: Le 1,277,583 - Surplus: Le1,191,167	

Average Farm size	10% increase (2008 baseline at 2 acres)	Farm sized increased by 25% (2.5), thus exceeding planned target of 10%.	
Cassava production technology	20% increase (2008 baseline at 6.63 x 50 kg bags per farmer)	17.13 x 50 kg bags per farmer in 2015; 19.89 x 50 bags in 2014.	Project exceeded target with 158% in 2015 and 200% in 2014.
Rice production technology	20% increase (2008 baseline at 12.87 of 50 kg bags)	Increased by 50% with 19.31 of 50 kg bags in 2014 and 40% in 2015 with 18.06 bags. Project exceeded planned targets.	
Vegetable production technology	20% increase (2008 baseline at 5.59 baskets)	Increased by 20% with 6.7 baskets but dropped by 14% in 2015 with 4.78 baskets.	
Cocoa production and marketing technology	10% increase in export volume (2008 baseline at 140 mt)	733 mt exported in 2014	Project exceeded target with 424% jump in export.
Cassava sales	10% increase market value (2008 baseline at Le 183,938.88 per beneficiary)	Increased by 258% with Le 657,687.28 in 2014 and 301% increase in 2015 with 736,851.23	Project exceeded planned targets with higher income flowing to producers.
Rice sales	10% increase (baseline at 877,627.02 per beneficiary)	Increased by 76% with Le 1,543,964.93 in 2014 and 72% increase with Le 1,511,240.93 in 2015.	
Vegetable sales	10% increase (baseline at 335,400.00 per beneficiary)	Increased by 101% with Le 674,335.29 in 2014 and 72% increase with the market value of 576,299.03 in 2015.	
21 rural market infrastructure improved		The markets service 1,050,360 people throughout the week. Farmers get higher producer prices as opposed to farm gate prices in which they were previously exploited; increase in volumes of sales and increase in incomes for producers; there is producer and buyer agreement that has resulted to 33.5 mt of milled rice supplied to WFP by cooperatives; and 10 mt of	

		milled rice supplied to Gold Tree by the kuyeh star FBO.	

Details- Link Road Construction

Table 1~~9~~: Average travel time for transporting produce on constructed feeder roads

Description	**Before construction**	**After construction**
Traveling time (vehicle)	1 hour 53 minutes	27 minutes
Traveling time (motor bike)	52 minutes	32 minutes
Waiting time (vehicles)	9 hours 21 minutes	3 hours 13 minutes
Waiting time (motor bike)	3 hours 24 minutes	43 minutes
Flow of traffic (vehicles)	0.35 per day	5 per day
Flow of traffic (motor bike)	6 per day	13 per day

Source: RPSDP, 2014

8. **This** intervention created jobs for 4,000 youths, and injected money in the local economy as most of the contractors are from within the community. Indirect benefits include about 400 women food and water vendors serving the laborers; 400 community members providing sand and stones to the contractors; (iii) and petty traders selling various items to the workers. The sub-component on matching grants has supported 75 farmer-based organizations (FBOs) with a total membership of 4,803 (male, 2,337; female 2,466), with the provision of storage facilities and processing equipment.

Annex 3. Economic and Financial Analysis

1. The Rural and Private Sector Development Project was aimed to improve efficiencies along the value chain of **selected agricultural commodities in order to improve the benefits** flowing to producers. The project was meant to contribute to increase production of selected agricultural commodities by 20 percent and sales by 10 percent through improvements in efficiencies along the value chain for targeted beneficiaries.

2. The project had four components including: (i) Domestic Marketing Improvement (original allocation: US$ 11.37 million; additional financing of US$ 14.5 million); (ii) Agricultural Export Promotion (original allocation: US$ 6.12 million; additional financing of US$ 2.7 million); (iii) Support to Farmer-based Organizations and Technology Improvement

(original allocation: US$ 7.03 million; additional financing of US$ 1.8 million); and (iv) Project Management, Monitoring and Evaluation and Policy Regulations (original allocation: US$ 5.47 million; additional financing of US$ 1 million). The key project activities included: (a) Domestic supply chain consolidation for specific crops and products, including rehabilitation of critical road links; (b) Provision of Matching Grants for rural market infrastructure improvements to address critical infrastructure needs for selected products; (c) Knowledge management and technical assistance to improve access to market information; (d) Upgrading and creation of market and export infrastructure; (e) Provision of Matching Grants for product development and adaptation, proactive marketing and standards compliance; (f) Introduction of high-yielding crop varieties; (g) Support for improving product quality and standards; (h) Support for identifying non-traditional exports and market opportunities; and (f) development of a market information system.

3. Economic and financial analyses were carried out to determine the economic rate of return at the completion of project implementation. The financial analysis were based on representative benefits and cost budgets for the various productive activities that were undertaken by project beneficiaries especially related to rice, cassava and cocoa production. For rice, this assumes upland rice because the project did not support any interventions in the in-land valley swamps where rice is grown under irrigation. It should also be noted that for all commodities farmers sold semi-processed commodities (i.e. milled rice, gari from cassava, and well processed cocoa) as a result of the processing equipment and training provided through the project. The analysis is based on estimating the net benefits (discounted at assumed discount rate), attributable to the project interventions. The economic analysis aggregates from the individual crop budgets to the overall number of beneficiaries covered by the project, and applies relevant conversion factors to derive economic/shadow prices.

Methodology

4. The net benefit flows from this project are assumed to accrue from activity levels which are assumed to have been boosted through project interventions. This analysis is an ex-post approach undertaken using the conventional cost-benefit analysis and uses the incremental benefits (with – without project, as shown in Table A3.1) to derive the net benefit flows discounted at 6 percent (based on World Bank’s recent recommendations).

5. As is the case with most development projects, there are often some key methodological challenges associated with the valuation of costs and benefit streams attributable to project interventions that may not easily lend themselves to objective valuation. For example, all activities related to institutional or farmer-based capacity building and rehabilitation and maintenance of feeder roads and establishment of rural market access infrastructure cannot easily be evaluated using standard economic analysis approaches because of the challenges related to the objective estimation of the benefits. As such, the net-benefits do not reflect all the interventions undertaken under the project.

6. There are several approaches that are commonly used in economic analysis of development projects. The conventional benefit-cost analysis and the key indicators of project viability are net present values (NPV) and the internal rate of return (IRR)[9]. In addition to the project related data

[9] This is normally plausible where it is assumed that correct utilization of project inputs will result in pre-determined outputs that will generate measurable impacts (or outcomes) on the target beneficiaries.

collected through various studies over the course of project implementation, including the end of project impact evaluation, the analysis was also based on some key assumptions which are highlighted in the section below. Secondly, given that a considerable proportion of the project funds were used to rehabilitate rural feeder roads, the analysis has also included the estimation of cost-effectiveness by comparing the costs of project outputs with costs of other similar projects and/or sector standards as a basis for selecting the most effective way to achieve the desired output. The key variables from crop models (upland rice, cassava and cocoa) used in the analysis and their estimated levels with and without the project are presented in Table A3.1. The following Tables (A3.2, A3.3 and A3.4) show how the real farm-gate prices and yields used in the analysis were estimated for the key crops. For yield estimation, the crop cuts methodology was adopted and carried out on a sample of beneficiaries' fields.

Table A3.1: Summary of crop models for rice, cassava and cocoa used for the economic and financial analysis

		With project			**Without project**			**Incremental**		
	UoM	Upland rice	cassava	Cocoa	Upland Rice	cassava	cocoa	Upland Rice	cassava	cocoa
Average Yield	MT/ha	**2.05**	**12.34**	**0.98**	**0.9**	**4.8**	**0.5**	**1.15**	**7.54**	**0.48**
Total Revenue	Le'000/ha	**4,461.52**	9,531.91	8,124.09	1,958.72	3,707.71	4,140.72	**2502.8**	**5824.2**	**3983.37**
	US$/ha	**741.12**	1,583.37	1,349.52	325.37	615.9	687.83	**415.75**	**967.47**	**661.69**
Total Variable costs	Le '000/ha	**842.47**	492.696	1,158.72	1,053.09	615.87	1,448.40	**-210.62**	**-123.17**	**-289.68**
	US$/ha	**111.96**	65.47	153.98	174.93	102.3	240.6	**-62.97**	**-36.83**	**-86.62**
Total Gross Margin	Le '000/ha	**3,619.05**	9,039.21	6,965.37	905.63	3,091.84	2,692.32	**2713.42**	**5947.37**	**4273.05**
	US$/ha	**629.16**	1517.90	1195.54	150.44	513.6	447.23	**478.72**	**1004.30**	**748.31**
Family Labour	pers. days/yr.	**190**	140	161	190	140	161	**0**	**0**	**0**
Hired Labour	pers. days/yr.	**98**	86	77	98	86	77	**0**	**0**	**0**
Returns to Labour	Le '000/pd	**19.05**	64.57	43.26	4.77	22.08	16.72	**14.28**	**42.49**	**26.54**
	US$/pd	**3.31**	10.84	7.43	0.79	3.67	2.78	**2.52**	**7.17**	**4.65**
Fixed costs	Le'000/ha	**Na**	na	Na	na	na	Na	**na**	**Na**	**na**
	US$/ha	**Na**	na	Na	na	na	Na	**na**	**Na**	**na**
Net profit	Le '000/ha	3,619.05	9,039.21	6,965.37	905.63	3,091.84	2,692.32	2713.42	5947.37	4273.05
	US$/ha	629.16	1517.90	1195.54	150.44	513.6	447.23	478.72	1004.30	748.31

Source: With project estimates based on the Project Impact Evaluation (see Box A3.1 for the brief description of the methodology); Some parameters for the without project scenario are based on appraisal estimates (PAD, Annex 9, Table 9F).

Table A3.2: Summary of real farm-gate prices

					Nominal farm-gate commodity prices (Le/MT) - Source: MAFFS						
Commodity	**Jan 15**	**Feb 15**	**March 15**	**April 15**	**May 15**	**June 15**	**July 15**	**Aug 15**	**Sep 15**	**Oct 15**	Average
Rice	5,342.79	5,370.27	5,384.83	5,390.68	5,453.11	5,487.50	5,496.33	5,498.83	5,587.30	5,408.86	5,442.05
Cassava	1,528.13	1,591.37	1,242.39	1,455.80	1,517.22	1,645.7	1,681.51	1,690.41	1,643.73	1,743.52	1,573.98
Cocoa	16,542.27	16,784.70	16,334.41	16,316.68	17,610.03	18,359.41	19,773.92	17,681.33	19,500.31	19,103.25	17,800.63

CPI (Source: Statistics Sierra Leone)

	Jan 15	**Feb 15**	**March 15**	**April 15**	**May 15**	**June 15**	**July 15**	**Aug 15**	**Sep 15**	**Oct 15**	Average
Rice	244.41	246.28	247.75	248.91	250.35	250.72	252.01	252.23	253.57	254.32	250.0556
Cassava	187.83	194.95	201.38	202.17	204.69	208.03	209.21	209.05	209.41	211.13	203.7839
Cocoa	216.61	215.11	215.84	215.84	217.99	217.65	218.49	212.34	211.32	209.27	215.0458

	Real (CPI Adjusted) farm-gate prices (Le/MT), Jan-Oct 2015 Real price = (Nominal price/CPI)*100%										
	Jan 15	**Feb 15**	**March 15**	**April 15**	**May 15**	**June 15**	**July 15**	**Aug 15**	**Sep 15**	**Oct 15**	Average
Rice	2,185.99	2,180.55	2,173.49	2,165.71	2,178.19	2,188.70	2,181.00	2,180.09	2,203.45	2,126.79	**2,176.40**
Cassava	813.57	816.30	616.94	720.09	741.23	791.09	803.74	808.62	784.93	825.80	**772.23**
Cocoa	7,636.89	7,802.84	7,567.83	7,559.62	8,078.36	8,435.29	9,050.26	8,326.90	9,227.86	9,128.52	**8,281.44**

Note: Rice and cassava prices are collected from the Price Information System established under Policy, Evaluation, Monitoring and Statistics Division (PEMSD) of the Ministry of Agriculture, Forestry and Food Security (MAFFS). The Price Information System and collection of prices was supported by the Project; Cocoa prices are based on prices offered to farmers by Kayeigorma Cocoa Company which was also established with support from the Project.

Table A3.3: Estimated rice yields (MT/ha)

District	**Yield Plot Size (M sq)**	**Wet weight (Kg)**	**Dry Weight (Kg)**	**Yield (Mt/Ha)**
Tonkolili	25	5.61	4.69	1.89
Bombali	25	3.80	3.4	1.33
Koinadugu	25	6.8	6.3	2.54
Port Loko	25	7.4	6.2	2.90
Kambia	25	8.3	7.1	2.80
Kailahun	25	7.8	6.3	2.50
Kenema	25	9.40	8.103	1.62
Kono	25	6.3	5.7	2.28
Bo	25	5.86	4.83	1.93
Bonthe	25	4.59	4.198	1.68
Moyamba	25	9.75	9.09	1.82
Pujehun	25	3.82	3.425	1.37
Western Area	25	5.972	4.959	1.995
National average	**2.05**			

Source: Yield estimation study, 2015 – supported by the project as part of the Impact Evaluation; yields estimated using the crop cuts methodology.

Table A3.4: Cocoa yield estimates (MT/ha)

	2010-11	2011-12	2012-13	2013-14	2014-15
Exports (MT) - Kasiyatama Kono-District	35.47	92.15	126.6	209.83	261.2
Exports (MT) Munafa-Kenema District	53.77	139.92	205.54	262.92	276.4
Exports (MT) Tegloma-Kailahun District	51.08	156.9	244.9	260.96	190.7
Total Exports (MT)	140.32	388.97	577.04	733.71	728.3
# of farm households	1,300	1,300	1,200	1,100	1,000
Average farm-size per farm household (ha)	0.57	0.57	0.62	0.68	0.74
Average yield (MT/ha)	0.189	0.524	0.777	0.988	0.981

Source: Project M&E Records; confirmed with export records from Kayeigorma Cocoa company

Summary of key results from the analysis

7. The overall estimated economic rate for the project is 21.8 percent with a Net Present Value (NPV) estimated at US$5.43 million as shown in the summary Table A3.2. The estimated end of project returns are somewhat lower than the appraisal estimate (with an ERR estimated at 34%) mainly because the project did not support palm oil and other crop investments as originally planned at appraisal.[10] The analysis is mostly based on the discounted net benefits accruing from sales of rice, cassava and cocoa. Sensitivity analysis also shows that the rate of return is highly sensitive to productivity, cost of production and the inclusion of cocoa as an investment commodity. A 10 percent reduction in productivity levels reduces overall rate of return by more than 10 percent; similarly when variable costs of production are increased by 10 percent, overall ERR and NPV are reduced by more than 10 percent. Net income from cocoa account for over 20 percent of the aggregate net benefit, as such, reducing the number of farmers cultivating cocoa has a profound effect on the overall project return. An increase in the discount rates results in a decrease in the economic rate of return. These factors, among others are key to determining the sustainability of the project returns. It is however important to note that these estimated returns are likely to understate the overall economic viability because many of the social benefits of the project such as employment and skills as access to other social amenities have not been accounted for in the analysis because of valuation challenges.

Table A3.2: Summary of ERR estimates

	Appraisal estimate	*End of project estimate*
NPV (US$ million)	*--*	*5.43*
ERR (%)	*34%*	*21.8%*

Source: Estimates based on end of Project I.E

Sensitivity Analysis

[10] Palm oil production could not be supported because of Round-Table for Sustainable Production of Palm Oil (RSPO) issues as Sierra Leone had not finalized the process of the national interpretation for the implementation of the international guidelines for sustainable palm oil production by the time the project became effective.

8. The ERR estimates have been calculated using fairly conservative assumptions as stated below (see section below). Most of the data is based on field assessments and studies conducted in the project area[11]. While it is assumed that the estimated ERR should be quite robust, the results depends on the sensitivity of the key variables that define the magnitude and direction of the results. The results of the sensitivity analysis are shown in Table A3.3.

9. The sensitivity analysis (see Table A3.4) shows that the rates of return remain robust except when assumed productivity reduces by 10 percent and when the cost of production sours above 10 percent. Also reducing the proportion of farmers cultivating cocoa by more than 30 percent compared to the project estimated number results in a significant reduction in the estimated rate of return for the project as a whole. A 10 percent reduction in productivity levels reduces overall rate of return by more than 10 percent; similarly when variable costs of production are increased by 10 percent, overall ERR and NPV are reduced by more than 10 percent. Net income from cocoa accounts for over 40 percent of the aggregate net benefit, as such, reducing the number of farmers cultivating cocoa has a profound effect on the overall project return. The impact of the assumed project horizon over which net benefits will continue to accrue does not seem to have a significant impact on estimated returns (as shown in Table A3.4), probably because of the dominance of staple annual crops (rice and cassava) in terms of number of farmers cultivating these crops, as compared to cocoa which is a perennial crop whose benefits accrue after a considerable lag. An increase in the discount rate reduces the rate of return, but overall it still remains in the positive range. These factors, among others are key to determining the sustainability of the project returns. Cost-reducing measures and/or productivity enhancing interventions would be more favorable to maintain project returns. Also critical is the number of farmers adopting cocoa production in addition to the staple commodities. It is also likely that other factors such as poor targeting resulting from elite capture where the actual beneficiaries are left-out, strength and/or weakness of the linkage effects in the local economy and the effect of natural shocks such as Ebola virus disease could have significant impact on project returns.

Table A3.4: Summary of sensitivity analysis

Project horizon	*Base scenario*	*Effect of Productivity changes on estimated ERR (%)*		*Cost of production changes*		*Cocoa*	*Changes in discount rates*	
		<10% reduction in yield	*>10% reduction in yield*	*<10% increase*	*>10% increase*	*% of cocoa farmers reduced by >20%*	*6.5%*	*7%*
15 years	*21.8%*	*19.3%*	*17.5%*	*20.1%*	*17.6%*	*16.9%*	*19.5%*	*16.6%*
10 years	*19.2%*	*17.2%*	*16.2%*	*18.4%*	*15.3%*	*14.8%*	*17.7%*	*15.1%*

Source: simulated estimates based on the excel template used for ERR analysis

Fiscal impact

[11] The studies consulted included: Beneficiary Impact Assessment undertaken in 2014 and the Project Impact Evaluation Study undertaken in 2015, in addition to data collected through the continuous project M&E.

10. At the current scale and length of time over which the project has been implemented in Sierra Leone, there are likely to be considerable positive fiscal impacts, such as direct and implicit taxes on farmers' incomes, growth in the rural economy through multiplier effects into non-agricultural activities (effect of the improved roads on social sectors, tourism, artisanal fisheries and mining etc. all of which would generate taxable income. However, these fiscal impacts are difficult to estimate because of lack of reliable data). The project has obviously contributed to improved rural livelihoods by providing short-term employment opportunities to almost 0.5 million people over 6 years.[12]

11. Key assumptions used in the analysis include:

1. Where data is significantly unrealistic/inconsistent, conservative assumptions have been made. Estimates for the activity output and input costs and output prices are based on the Impact Evaluation study and earlier studies such as the Beneficiary Assessment study undertaken in 2014.
2. A 15 year time horizon is considered for the full project build-up of costs and benefits based on individual activity or activity groups assuming a 10 year horizon.
3. Current income levels (and assumed "without project" incomes) are assumed to be the equivalent of what beneficiaries received from the sale of rice, cassava and cocoa. For rice and cassava, consideration is made of subsistence needs, given that these are key staple commodities in Sierra Leone. Cocoa is assumed to be fully tradable.
4. A conservative estimate of productivity increase (0.2% per annum) has been made to take into account access to better technology (through improved seed and planting materials provided under the project), skills and know-how (through capacity building support) as well as improved inputs as a result of the project support;
5. Input costs include seeds, establishment costs and implements and other capital requirements. Output prices assume low quality, rural level prices.
6. Family labor is valued at the rural labor rate (informal labor) of Sierra Leone, as the opportunity cost in the remote rural areas where alternative gainful employment is scarce.
7. A discount rate of 6 percent is used, in line with the recent recommendations by the World Bank; Sierra Leone's rate estimated based on current interest rates as published by the Bank of Sierra Leone would likely be much higher. The sensitivity analysis includes higher discount rates to illustrate how sensitive the project returns are to changes in the discount rate.
8. Significant distortions in the economy in input costs and output prices are assumed to be minimal (no significant policy interventions distorting market prices). Therefore, financial and economic costs and prices are assumed to be virtually the same.
9. Overall project costs include the appraisal investment costs. No further investment costs are assumed after year 5, except the recurrent variable costs required to sustain improved yields. A descriptive summary of key economic variables from the crop models upon which the estimated incremental net benefit flows have been estimated are presented in Table A3.1 of this report.
10. Some benefits have not been included in the analysis because they are either difficult to value, or reliable data is not available (value of community assets provided, expected

[12] Approximately 56,000 households (and indirectly over 200,000 households) benefited from the project interventions, including over 10,000 farm households that cultivated cocoa as an exclusive export crop.

human capital improvements and institutional capacity building as well as rural access infrastructure supported under the project).

Box A3.1: Summary Description of the Impact Evaluation Methodology
An impact evaluation was undertaken by an independent consulting firm to assess the impact of the RPSDP interventions on the intended beneficiaries. The methodology applied to attribute the outcomes to the project interventions by the consultant is the Difference-in-Differences technique to measure impact of RPSDP on intended beneficiaries and project “spill-over”. It is a statistical technique that calculates the effect of a treatment (i.e., an explanatory variable or an independent variable) on an outcome (i.e., a response variable or dependent variable) by comparing the average change over time in the outcome variable for the treatment group to the average change over time for the control group. This approach involved two main steps. First of all, communities for the survey were categorized into 2 categories – Treatment and Control category. Representative samples of respondents were drawn for each of these categories and analysis of the differences in the key variables of interest was undertaken. The results are shown in the Impact Evaluation Report (unpublished) which was prepared at the end of the assignment, discussed and agreed with the Government of Sierra Leone.
Source: Seray Consulting Associates, 2015

Cost-effectiveness analysis of feeder roads rehabilitation

12. Given that the project substantial project resources were used to rehabilitate feeder roads in order to improve market access, a cost-effectiveness analysis was undertaken to estimate the cost of rehabilitating feeder roads under the project relative to other feeder roads projects implemented in Sierra Leone. The cost effectiveness ratio (the cost per km) for RPSDP rehabilitated rural feeder roads is estimated to be slightly higher but comparable with unit costs for other feeder roads rehabilitation projects in Africa (as estimated through a comprehensive study undertaken by African Development Bank in 2014). The RPSDP supported feeder roads rehabilitation, including construction of bridges and culverts as well provided maintenance support to the Local Councils. The proportion of the expenditure that went to actual rehabilitation works is estimated at about 60 percent of all the resources allocated to feeder roads rehabilitation and maintenance works. It is also widely acknowledged that the technical specifications of the RPSDP rehabilitated feeder roads is better than other similar projects implemented in Sierra Leone. As such, the cost-effectiveness of feeder roads rehabilitation under the RPSDP is considered to be favorable.

Summary of cost-effectiveness of feeder roads rehabilitation

	Appraisal estimate (US$ Million)	Km rehabilitated	Cost effectiveness ratio	Cost effectiveness ratio for AfDB
Phase I	12.94	464.0	27,887.93	--
Phase II	12.8	507.9	25,201.81	--
Total	25.74	971.9	26,484.21	
Of which about 60% was for actual rehabilitation works	15.44	971.9	15,891.00	12,800.00

Source: Project M&E Records; for other projects, the data is quoted from the Study on Road Infrastructure Costs: analysis of unit costs and cost overruns in road infrastructure in Africa, African Development Bank, May 2014. This is the unit cost for re-gravelling of unpaved feeder roads.

Conclusions

13. *Based* on the estimated economic rate of return at the end of project implementation, the project still remains economically viable and should have considerable impact on the targeted households. This analysis is based on interventions on which objective data is available. It is likely that the social return for the project is much higher than can be empirically demonstrable. The sensitivity of the project returns to key variables used for the analysis also shows that the economic rate of return is still attainable within a given range of these selected variables. The cost effectiveness ratio (the cost per km) for RPSDP rehabilitated rural feeder roads is estimated to be slightly higher but comparable with unit costs for other feeder roads rehabilitation projects in Africa (as estimated through a comprehensive study undertaken by African Development Bank in 2014). As such overall project efficiency is considered to be **Substantial.**

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Malick Daniel Antoine	Consultant	CAFW1	
Mohua Mukherjee	Senior Energy Specialist	GEE06	
Huong-Giang Lucie Tran	Consultant	AFTN2 - HIS	
Gayatri Acharya		AFTS4	TTL
Supervision/ICR			
Hardwick TChale	Senior Agricultural Economist	GFADR	TTL
Beatrix Allah-Mensah	Senior Operations Officer	AFCW1	
Ferdinand Tsri Apronti	Consultant	GEDDR	
Charles Annor-Frempong	Senior Agricultural Specialist	AFTAR	TTL
Christopher Juan Costain	Lead Financial Sector Speciali	GFM01	
Rose Abena Ampadu	Programme Assistant	AFCW1	
Kadir Osman Gyasi	Senior Agriculture Economist	GFA01	
Oluwole Pratt	Financial Management Analyst	AFTME HIS	
Abdoulaye Toure	Lead Agriculture Economist	GFA01	
Innocent Kamugisha	Procurement Specialist	GG001	
Sydney Godwin	Financial Management Specialist	GG031	

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	US$ Thousands (including travel and consultant costs)
Lending		
FY06		85.16
FY07		209.28
FY08		0.00
Total:		294.44
Supervision/ICR		
FY06		0.00
FY07		0.00
FY08		122.16
Total:		122.16

Annex 5. Beneficiary Survey Results

1. In order to enhance flow of food and export commodities to markets and consumption centres, feeder roads were constructed. About 50 percent of such roads have been engineered by the project as they did not exist initially. Under Phase 1 of the RPSDP (2008 to 2012), 464 km of feeder roads were planned to be constructed. About 426.88 km (or 90.2%) of this was completed. This figure represents approximately 11 percent of a total 4,152 kilometres of feeder roads in Sierra Leone. Under Phase II of the project, a total of 601.5 km of roads will be rehabilitated in nine of the thirteen agricultural districts, 552km being new roads, and an additional 49.5km from Phase 1.

2. Beneficiaries were asked to rate their level of satisfaction with improvements made to the RPSDP-constructed feeder roads based on a Likert scale, with ranking that ranges from “very unsatisfied” to “very much satisfied”. The results show that the managers of the project are generally satisfied (rank 3 on the Likert Scale). Among the three categories of stakeholders surveyed, the satisfaction level of farmers was highest. The percentage of farmers who are either satisfied, very satisfied or very much satisfied ranges from 75 percent in the Western Province to 100 percent in the Southern Province. The average rank of farmers’ level of satisfaction is “2”, which represents “very satisfied” on the Likert scale. The average rank of traders’ level of satisfaction is “3”, representing “satisfied” on the Likert scale. That is to say, the ‘average’ trader is likewise satisfied with the roads. The main reason cited by stakeholders as the basis for the levels of satisfaction is improved travel time, followed by increased vehicular flow.

Twenty-five markets are being constructed in the districts within the investment portfolio of the project. Whereas 86 percent of farmers interviewed within the proximity of the new markets indicated the condition of the markets are fair, 47 percent of traders within the market communities perceived them to very good. Most beneficiaries were ‘’very much satisfied’’. The cumulative average of the satisfaction levels of farmers and traders is 3 (satisfied). Farmers and traders provided various reasons for their satisfaction levels for the construction of the markets. Prominent among them is the new state of the markets, which was cited by 77 percent of the farmers and 42 percent of traders Since the Districts that were surveyed had none of the RPSDP markets completed or handed over to the District Council, it was difficult to assess the functionality of the markets.

3. **Rural Market Information System:** All the districts surveyed have established systems that capture weekly market prices of crops at the market levels and also disseminate the information on availability of such crops at the level of farmers. However, most of the beneficiary farmers interviewed receive their pricing information from other sources, particularly local traders - 39 percent. Eleven percent indicated they quote prices provided by the FBOs stores. Although the RPSDP rural market information system has made little impact on commodity pricing determination, only 6 percent of beneficiary farmers are not satisfied with their sources

of information. The RPSDP beneficiary farmers gave various reasons for the satisfaction. A reasonable number of them – 38 percent said the source gives them bargaining power over traders.

Agriculture export promotion

4. Cocoa farmers cultivate acreages of land between 0.34 ha to a maximum of 7.54 ha. The average farm size was recorded at 1.5 ha. This is consistent of with National average (SLEIPA 2009). This figure represents a 61 percent increase from the baseline value of 0.93 ha. The implementation of findings of a sub-regional study of export potential of selected crops has led to the establishment of three cocoa cooperatives in Kailahun, Kenema and Kono with a total membership of 12,688 (made up of 10,256 males and 2,432 females). The Cooperatives have exported a cumulative total of 1,314.87 Mt of Grade 1 cocoa since 2011; export volume for the 2014 trading season of 733 Mt as at the time of compiling this report. The project has enhanced the competiveness of the cooperatives. Among a range of interventions, it is strengthening the capacity of the cooperatives to buy from non-cooperative farmers.

5. The farmers rated their production level as very good, good or fair with majority (40%) of them rating it as good. They also expressed satisfaction with the impact of the RPSDP on their production. Half (50%) of them were "satisfied", 40 percent were either "very satisfied" or "very much satisfied". All the farmers who expressed satisfaction attributed their satisfaction to increase in income from cocoa sales.

Support to Farmer-Based Organizations

6. Since the inception of the project, RPSDP has made conscious effort to promote the establishment of farmer-based organizations (FBOs) for its priority commodities – rice, cassava, cocoa and vegetables. The interest in forming groups along commodity lines has been driven by the premise that FBOs give farmers bargaining power in the market place, enable cost-effective delivery of extension services, and empower FBO members to influence policies that affect their livelihoods. About 184 FBOs across the different commodity lines engaged in the cultivation and/or processing of the selected crops have benefited from RPSDP. Of these, the majority (56%) of the FBOs are engaged in rice processing while 33 percent of them are engaged in cassava cultivation and processing. Only one FBO—Koinadugu Women Vegetable Farmers' Cooperative—is engaged in the cultivation and trading of vegetables.

7. The project has strengthened and resourced the FBOs by providing capacity building training and processing facilities to enable them add value to commodities in the country's food basket regions. Seventy five FBOs have been equipped with storage and drying facilities and have processing equipment to improve quality, enhance value and reduce post-harvest losses.

8. As proxy for assessing the effectiveness of community participation in FBOs, capacity building intervention, performance of the FBOs and executives, the survey captured FBO members' and executives' satisfaction levels on: (i) Services rendered by the FBOs to the member; (ii) Performance of executives; and (iii) Operation of the facilities.

9. Overall, FBO members gave favourable ratings to services that the FBOs are providing to them. Over 95 percent of them rated the services as either “very good”, “good” and “fair”. It is therefore not surprising that over 91 percent of the members are either “very much satisfied”, “very satisfied” or “staified” with the services redered by them. Members assigned various reasons for their satisfaction levels. About 37 percent of those who are ‘’very much satisfied’’ attribute their rating to ease in assessing market information. On the other hand, members who are ‘unsatisfied’ attribute it to the inability of the FBOs to provide storage facilities for their produce.

10. The survey also captured the performance of the executives of the FBOs. Members indicated the performance of their executives as ‘very good’ – 65 percent -, and were ‘very much satisfied’ with their performance. Nevertheless, 6 percent of members were not satisfied with the performance of their executives. Satisfaction level expressed by members focused on leadership: 78 percent of those who expressed ‘’very much satisfied” and 33 percent of ‘’unsatisfied’’ members.

11. Most members of the FBOs patronise the facilities provided by RPSDP. The survey revealed that 71 percent of members interviewed patronise the facilities. In addition, 76 percent of them consider the operation of the facilities as either “very good” or “good” while 86 percent of them are either “very much satisfied”, “very satisfied” or “satisfied”. Ninety-eight per cent of respondents who are ”very much satisfied”, 89 percent of those who are “very satisfied” and 64 percent of those who are “satisfied” with the facilities attribute their satisfaction to the quality of the processed produce. Similarly, 67 percent of those who are “unsatisfied” and 43 percent of those who are “very unsatisfied” attribute their dissatisfaction also to quality.

12. **Profitability of operations and benefit sharing:** Profitability connotes sustainability of the facility provided where it is able to run itself without external injection of funding. Profitability assessment of 12 facilities was undertaken. The assessment revealed that 3 facilities are running at loss. The other 9 were making monthly surplus between Le1, 085,000 and Le2, 840,000. Most of the facilities that are currently making losses support operations with members' dues. The executives of these FBOs who operate at a loss perceive profitability as key for sustainability of the facilities and justify their continued support of the operations with their dues on the hope that their operations will eventually be profitable.

FBO governance arrangement: Various variables were used to measure good governance arrangements for the management of the FBOs:

13. **Entry requirement for membership:** The necessary requirement for most of them is that a prospective member be a farmer engaged in the cultivation of the crop in question. One has to pay membership dues and be prepared to attend meetings as well as engage in collective work on the farm and at the processing facility, if required. Some of the FBOs have probation periods during which a new member has to serve the FBO.

14. Participation **of members in collective decision making:** The survey disclosed that 39 percent of FBO members and non-FBO members in project communities have participated both

in FBO and RPSDP activities. Forty-seven percent indicated they were involved in the construction of an FBO facility while 31 percent were involved in the process of forming an FBO. On the average, about 45 percent of members of FBOs are active. The executives also revealed that 77 percent of members attend meetings regularly while 88 percent of them pay their dues regularly. Thirty-five percent of the FBOs surveyed have all their members fully paying their dues. The respondents are impressed with the level of community participation in the activities of the FBOs and RPSDP at the community level. Sixty-five percent of them are of the view that community participation is "very good" while 84 percent are either "very much satisfied" or "very satisfied" with the level of community participation.

15. **Constituting executives of FBOs:** All the FBOs conduct elections to select their executives. The only exception is Tanyaro Farmers Association in the Koinadugu District, which conducts elections only '*when executive members are not doing well*'. It was revealed during FGDs with the FBO executives that leadership change occurs from time to time. Among the 27 FBOs whose leaders were interviewed, there is a change in leadership on average every 3 years. It must be noted that women's participation in leadership is quite high. About 43 percent of executives are women.

Facilitating factors for, and constraints on, RPSDP implementation success

16. The integration of bottom-up and top-down decision making adopted by the project were significant in facilitating project success. Although funding decisions were taken at the national level, it did not impede integration of local aspirations as the local councils were at the forefront in identifying and selecting investment locations even though national institutions set up the framework for local decision making processes.

17. The introduction of cocoa farmers cooperatives as buying entities, among other things, improved market efficiency in the marketing of cocoa by providing competition in the market. It guaranteed farmers ready market and cash payment, as well as enhance cocoa production in the cooperative areas. Since the cooperatives were formed, the companies have increased their price offers with average price level from Le 1,108, 000 per 70kg bag in 2011 to Le3,180, 000 in 2014 (Field survey, 2014).

18. There are also constraining factor that affected project success. The most severe one was the inability of most FBO equipment to operate at fully deployed capacity. This impeded smooth operations and reduced productivity. Another challenge is the fact that the project focused on efficiency in supply value chain with little attention on production and productivity issues. This has affected the supply of produce to feed the processing facilities

19. One major goal of the project is to create enabling environment for efficient delivery of food and cash crops from production areas to urban centres, based on the principle of complementarity of investments. This requires an integrated investment approach in which infrastructure, and organisational and marketing system gaps, are addressed in particular project

locations. However, efforts in this direction were adversely affected by decisions that were based purely on political considerations rather than technical assessments. Project investments were spread across the districts such that necessary synergy was not created for investments made to reinforce each other and have the desired multiplier effects.

20. Further, institutional capacities in some areas of the project were quite weak, especially at the District Council level. Inability of most Local Councils to adhere to procurement regulations of the project delayed commencement and completion of some facilities. Procurements had to be re-conducted at the Project Support Unit to meet transparency and fairness requirements of the procurement regulations.

21. Also, the low educational attainment of members of FBOs and operators of the facilities inhibits learning abilities and capacity to efficiently manage the facilities. Even more so is the low technical capability of the operators of the facilities.

Annex 6. Stakeholder Workshop Report and Results

(NA)

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

1. The Borrowers ICR noted that the project was implemented in two phases: an Original Grant Phase from 2008-2012 and an Additional Financing phase from 2012-2015. The Original Grant was US$30m and the Additional Financing was US$20m.

2. ***PDO Achievement***: The project was able to meet all the targets set out for the PDO level indicators as shown in the table below. As shown by the outcome indicators, there were production increases for rice (averaging 2.05mt/ha) and cassava (averaging about 12.34mt/ha); increases in real farm gate prices received by project beneficiaries for cassava, rice and cocoa all exceeded project targets (which was10 percent increment) by 54.49 percent, 81.36 percent, and 100.76 percent for the respective crops. This can be attributed to support provided through processing as well as access to markets. The project reached 56,000 direct beneficiaries as against a project target of 50,000; of which 47 percent are female. The achievements under each component over the two phases of the project were described as follows:

Component 1: Domestic Market Improvement

1.1 *Rehabilitation, Spot Improvement and Maintenance of Feeder Roads*

3. On Roads rehabilitation, a total of approximately 971.9Km of feeder roads were rehabilitated over the two phases of the project[13], which represents 97 percent of the total project target of 1,000Km. The rehabilitation work also included the construction of 62 bridges and 1,643 culverts. A number of challenges were faced during implementation, particularly in the second phase of the rehabilitation of feeder roads which affected the pace of implementation of the contracts. These included, the challenges related to the payment of contractors caused mainly due to delays in preparing Interim Payment Certificates (IPCs) by the project managers, the delays in the preparation of the payments by the PCU mainly due to the challenges with cash flow management (given the high number of contracts), and the disruption of works as a result of the Ebola outbreak, which for large period in 2014/2015 placed restrictions on the movement of people and vehicles. The Ebola outbreak also affected effective monitoring of the rehabilitated works by the PCU and other stakeholders.

1.2 *Construction of district/community marketing infrastructure*

4. The project had a target of constructing 22 markets across the 13 agricultural districts in the country. The markets are to serve as meeting point for farmers and traders, and also provide storage facilities for the proper and safe keeping of commodities. A total of 21 of the 22 markets were constructed. The markets were constructed with ancillary facilities such as hand pump water well and VIP toilets.

1.3 *Matching Grants to Farmer-Based Organizations (FBOs)*

5. The matching grant supported the construction of rural infrastructure and the provision of equipment to FBOs along the value chains of rice, cassava, cocoa, fish and vegetables. For the rice FBOs, the rural infrastructure support included the construction of rice mill processing facilities,

[13] The project had two phases: an Original Grant of US$30m from 2008-2012 and an Additional Finance of US$20m from 2012-2015.

stores, and drying floors. The equipment support included the provision of rice milling machines, de-stoners, generators. Additionally, moister meters, power tillers, weighing scales and stitching machines were provided to the rice cooperatives supported by the project. A total of 113 rice FBOs were supported; 3 of them were also cassava processing groups. All 113 groups benefited from rice mill processing facility and or storage facilities; 112 benefited from drying floor; and 102 benefited from at least one agro-processing equipment. The agro-processing equipment included rice milling machine, de-stoner, and generator. A total of 60 cassava FBOs received rural infrastructure support in the form of processing shed/storage facility; 27 of the 60 FBOs were provided with hand-pump water well and toilet facilities; and 59 FBOs received at least one type of agro-processing equipment. The agro-processing equipment included hydraulic cassava pressing machines; cassava grating machines; gari-roasting trays; and sieves.

***1.4** Knowledge Management and Technical Assistance to Improve Access to Market Information*

6. The project provided support to the Planning, Evaluation, Monitoring and Statistics Division (PEMSD) of MAFFS for the Domestic Market Information System (DMIS) through which local market prices for agricultural commodities were aired on a weekly basis in all the 13 districts through community radio programs. Through this support over 1000 farmers were reached with marketing information over the two phases of the project. The project also supported the Sierra Leone Investment and Export Promotion Agency (SLIEPA) to establish and operate the Trade Information Centre (TIC), an online information system which provides information on customs regulations, export procedures, foreign markets and business opportunities, including agribusinesses.

Component 2: Agricultural Export Promotion

2.1. *Performance of the cocoa exports among the cooperatives supported by the project*

7. The project provided support to the cocoa cooperatives to ensure that farmers increase production and meet the appropriate quality standards for export. Over the period 2010-2015, the cooperatives supported by the project were able to export a cumulative total of 2,600Mt to mainly Tachibana Company in Japan. The revenue generated from this export is approximately a cumulative total of Le28bn over the period. The cooperatives were also admitted as members of the Fair Trade certification scheme as they were able to meet all standards ranging from governance to quality of cocoa produced. There was however concern about the elite capture and governance issues of the cooperatives after project closure. The Ebola outbreak affected the output of the farmers reduced their export for 2015.

***2.2** Access to Improved Agricultural Technology and Practices*

8. The project also supported rice and cassava FBOs with improved rice and cassava varieties in 2011. The support which was provided through SLARI aimed at providing farmers with improved seeds and planting materials to increase their production. A total of 84 rice FBOs across 11 Agricultural districts of the country benefited. Rice plots were established in the upland and/or lowland agro ecologies depending on the predominant rice culture undertaken or choice made by farmers in a particular FBO in the district. Plot sizes of 1000 m^2 were recommended in both the upland and lowland ecologies. Quality seeds of the appropriate improved rice varieties were distributed to selected farmers for cultivation in specific agro ecologies. Farmers cultivating upland rice received eight Kilograms seeds of the variety NERICA 3 or Pa Kiamp in all the

districts. Farmers cultivating in the lowlands received five Kilograms seeds of NERICA-L 19, NERICA-L 20, ROK 10, ROK 24 or ROK 30 depending on the specific lowland ecology they cultivated, ensuring that lowland farmers received cultivars that suited their cropping environments. The quantity of seeds rice each farmer received was equivalent to the recommended seed rates for the specific agro ecology being cultivated. A total of 20.2 tons of seeds of improved high yielding rice varieties were produced by farmers in the On-Farm rice multiplication activity undertaken in eleven districts, covering both the upland and lowland rice ecologies.

9. On cassava, improved varieties selected and preferred by Farmers Groups/ABU/FBOs were distributed to individual farmers to plant on their respective farms. Three farmers from each RPSDP-approved FBO were supplied improved cassava varieties each to plant one acre (0.4 ha) but some farmers combined their planting materials and planted as a group giving a total of three (3) acres (about 1.2 hectares) for the three farmers selected from each FBO. The collaboration also focused on increasing the knowledge and skills of the farmers on best-bet practices in cassava production.

With the introduction of the improved rice and cassava varieties for on-farm multiplication, the project set the pace for a national seed and planting material multiplication scheme to be institutionalized.

Component 3: Support to Farmer Based Organizations and Technological Improvement

3.1 *Strengthening the Legally Registered FBOs and their Unions*

10. The project supported the establishment of 3 cocoa cooperatives and 275 FBOS. Efforts to strengthen these groups included promoting good governance practices and functional capacity building. Good governance practices included supporting the formation of democratic elected executives; ensuring the groups operate bank accounts which had at least two signatories; holding of regular meetings; and information sharing. Capacity building support included training on group dynamics, leadership and organizational management; business plan development; book keeping and records management. They were also trained in best agronomic practices and the basic operations and maintenance of tools and equipment.

11. In addition, to the support provided directly to the cocoa cooperatives, the project also supported the establishment of the Kayeigorma Company, as the marketing outfit, which handles all export trading activities of the cooperatives. Seed capital was provided by the project to the Kayiegorma Company in trust for the cooperatives, to ensure funds are available to finance trading activities. The project also supported the institutional and governance reform of the National Federation of Farmers in Sierra Leone (NaFFSL). The support to NaFFSL included the review of their constitution; the development of a policy document and strategic plan; financing of key activities in the strategic plan, including the holding of an election; logistical support which included office rehabilitation and the provision of vehicles and equipment, as well as some operational cost.

Component 4: Project Management, Monitoring and Evaluation and Policy Regulations

__4.1__ Monitoring and Evaluation

12. The Result Framework of the project indicated that the PDO level indicators have all been achieved. As shown by the outcome indicators, there are production increases for rice (averaging 2.05mt/ha) and cassava (averaging about 12.34mt/ha); increases in real farm gate prices received by project beneficiaries for cassava, rice and cocoa all exceeded project targets (which was10% increment) by 54.49 percent, 81.36 percent, and 100.76 percent for the respective crops.

13. The PCU carried out and supported a lot of studies. The major studies included: the Development of Benefit Sharing Scheme for FBOs; a Beneficiary Impact Assessment (BIA) in order to understand the perception of beneficiaries regarding project activities, and document lessons to inform the implementation strategy for the remaining period of the project as well as form the basis for the final independent Impact Evaluation; and a Rice Processing, Marketing and Distribution study. These studies contain valuable information on major issues relating to the value chains supported by the project.

__4.2__ Financial Management and Disbursement

14. As at end of project (14th November 2015) the project had accessed about 98.2 percent of the original grant of US$30m, with about 1.8 percent (approximately US$0.509m) still outstanding. On the additional financing of US$20m which was originally allocated, 95.42 percent had been disbursed, with 4.58 percent outstanding. However, of the outstanding, the project was unable to access 4.02 percent (which is approximatelyUS$0.803m) due to exchange rate losses resulting from the appreciation of the US Dollar against the SDR. This had significant implications for all the contracts that were signed and for which works/services were completed or assignment carried out.

__4.3__ Environmental and Social Safeguards Compliance

15. The project compliance on both environmental and social safeguards was commendable throughout implementation. The project triggered the Environmental Assessment (OP/BP 4.01) and the Involuntary Resettlement (OP/BP4.12) policies. Appropriate ESIA and management tools were developed and implemented. For instance, environmental safety and health issues were incorporated into feeder roads contracts and district engineers had the responsibility to ensure compliance to ensure safety of the workers, community members, including children and other unauthorized people. The project developed and implemented a Grievance Redress Mechanism. The Grievance Redress mechanism developed and instituted by the project was very instrumental in forestalling potential conflicts that could have arisen through land dispute.

5.0 Key Lessons and Challenges

16. Feeder Roads Contract

- Packaging of road rehabilitation contracts - packaging of contracts done to issue many small road works rehabilitation works per lot to one contractor rather than the full stretch of the road as such this increases the number of contractors and payments to be made and we run the risk of attracting small and inexperienced contractors.

- Under Phase 2 of the feeder roads rehabilitation contracts the duration of the contracts were too short. A realistic timing would be one year. From experience, most contractors don't have the funds to mobilize to start the work with limited funds to refinance. Duration of three to seven months not realistic.
- Securities – During implementation of Phase 2 there was a need to renew performance and advance payment guarantee that had expired, to keep alive; so that in the event of default they can be encashed. One of the problems observed was that contractors will ask for the originals to go to the bank for renewal and some will not bring them back, increasing the risk of loss of funds should the contract be terminated.
- Quality of documentation on payment request prepared by District SLRA Engineers was very poor. We observed that contract values are most times wrongly quoted, advances are not recovered, estimated costs in BOQ not adjusted for discount, etc. This increased time spent to review payment certificates by the financial management team.

17. Flow of Funds

- Disbursement conditions on the original grant not reviewed in the design of the additional grant for upscaling, thus affecting the flow of funds. Designated Account and ceilings on initial advance were not reviewed to extend the ceiling to allow for both credits (funds to be accessed) during the life of the project. This meant that for the Project to pay for services from its designated account, part or full transfer of the initial advance have to be done between the funding instruments, which delays payments and explains why both grants are not 100 percent disbursed.

18. MGF

- Proper screening of FBOs to ensure that the crop they select is the dominant crop of the group and there should be evidence of individual members' farms before support is provided. GPS coordinates should be taken of each farm and the area of farm size estimated.
- Support to FBOs should be based on district crop comparative/absolute advantage in order to maximize the efficiencies of the groups and the gains of the project.
- The governance arrangements of each group must be scrutinized properly. Spouses should not be allowed to be members of a given executive. The project should intensify information sharing in groups so that group members are aware of what is going on and this will prevent elite capture.

6.0 Sustainability Strategy

19. *Feeder Roads*- the sustainability of the feeder roads rehabilitated is predicated on the government providing funds to the local Councils through the Roads Management Fund Administration (RMFA) for the maintenance of feeder roads. Local councils should ensure that these roads are captured for maintenance in their road maintenance annual work plans that they present to the RMFA. The mission therefore recommends that the MWHI should provide guidelines to local councils that will ensure the roads are captured in their annual work plan.

20. *Markets-* the maintenance and up-keeping of markets is a wide spread challenge in most parts of the country. The project had instructed local councils to set up management committees for the markets constructed by the project. Such committees should include local councils, MAFFS District Offices, and Chiefdom authorities. The role of the committees amongst many other things will include to set bye-laws for the operations of the markets and ensure that a proportion of the revenues generated from the markets are reserved for the maintenance of the structures.

21. *Cocoa Cooperatives and FBOs*- as part of the support under the cocoa subsector, farmers were provided with high yielding and improved cocoa seedlings/planting materials to assist them in replanting old cocoa farms. This is expected to guarantee improved harvests in the next couple of years. In addition, two major challenges that are normally facing farmer based organizations are access to finance and maintaining good governance practices that will ensure group cohesion and prevent elite capture. In the case of the cocoa cooperatives supported by the project, sustainability initiatives taken so far included re-investing some of their returns from the cocoa export in acquiring assets (e.g. warehouses, trucks, etc.) that will bring income and aid future trading activities. However, that will not be sufficient and a more sustainable means should be explored. One option would be to link the cooperatives and FBOs to the community banks where they can access credit. MTI through it Cooperatives Department should also intensify oversight and mentoring of these cooperatives and FBOs to ensure the gains in good governance are not reversed.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

N/A

Annex 9. List of Supporting Documents

- RPSDP: Final Report: Impact Evaluation. Submitted by Seray Consulting Associates, December 2015
- RPSDP 2014: Beneficiary assessment survey report
- Project Paper , June 4: Restructuring of RPSDP
- Project Paper,2011: Additional Financing of RPSDP

Annex 10. Split rating Assumptions and Calculations for PDO Assessment

(A). Split rating Assumptions.

Below are the assumptions of the PDO assessment based on data availability

(a) The **cut-off date for the split-rating is May 2011**

(b) The **pre- and post-disbursement weights turn out to be roughly 47:53** (pre- and post-restructuring)

(c) For the **post-restructuring achievement of PDO**, other assumptions are:

(iv) ***Indicator 1***: *50 percent of targeted beneficiaries achieve 20 percent increase in production (interpreted as productivity increase)*

(v) The target beneficiaries was 50,000. 50 percent share of the beneficiaries; 25,000 must indeed achieved this 20 percent productivity increase.

(vi) For the two crops identified, targets were as follows: cassava: 12 tons/ha; rice: 0.88 tons/ha. Actual achievement is as follows: cassava: 12.34 tons/ha; rice: 2.05 tons/ha.

(vii) With 50 percent beneficiaries achieving the above yield increase as indicated, then the target was achieved satisfactorily (rated 5)

(viii) ***Indicator 2*** *: 50 percent of targeted beneficiaries achieve a 10 percent increase in sales (interpreted as sale price)*

(ix) The share of beneficiaries should also be at least 50 percent (i.e. 25,000 beneficiaries) that must indeed achieved this 10 percent sales increase.

(x) For the three crops identified, the targets based on 20 percent increase were as follows: cassava: Le 605/kg; rice: Le 1,452/kg; and cocoa: Le 4,125/kg. Actual achievement is as follows: cassava: Le772/kg; rice: Le2,176/kg; and cocoa: Le8,281/kg

(xi) Since we have the 50 percent beneficiaries achieving the sale price increase as indicated, then this target was achieved satisfactorily (rated 5)

(xii) ***Indicator 3****: No of project Beneficiaries; Direct and Indirect*

(xiii) 50,000 direct beneficiaries are supported by the project; and 200,000 indirectly benefit from the project.

(xiv) Actual achievement: 56,000 direct beneficiaries and 213,000 indirect beneficiaries. This is satisfactory and have a rating of 5.

(xv) Overall, for numeric ease, and assuming that all three have the same weight, we have an average rating of 5 (Satisfactory),

(d) For the **pre-restructuring phase**, the achievement of PDO assessment is as follows:

(iii) The indicators remain unchanged but the targets are amended based on evidence from PAD economic and financial analysis on beneficiaries.

(iv) ***Indicator 1**: 50 percent of targeted beneficiaries achieve 20 percent increase in production (interpreted as productivity increase).* This would mean a target of 150,000 producer beneficiaries since the target from Economic and financial analysis of PAD is 300,000 beneficiaries.

(v) We have achieved a coverage of 17,491 direct beneficiaries (rated Unsatisfactory: 2)

(vi) Productivity target based on a 20 percent increase at appraisal were as follows: cassava: 15.6 mt/ha (based on 13 tons/ha baseline and 20 percent increase); rice: 1.03 tons/ha (based on baseline figure of 0.86mt/ha); and cocoa: 0.5 tons/ha.

(vii) The achievement as noted in the AF project paper is as follows: cassava: 14.0 tons/ha; rice: 0.86 tons/ha; and cocoa: 0.65 tons/ha (rated as Moderately Unsatisfactory: 3)

(viii) ***Indicator 2**: 50 percent of targeted beneficiaries achieve 10 percent real increase in sales (interpreted as sale price increase).*

(ix) Assuming the baseline prices data from the PP of 2011 which appears to be more accurate and more stringent and factoring in inflation at 47 percent during the period 2012-2015, with the expected target of 10 percent price increase, we have the following sale price targets at end of project: cassava: Le864/kg; rice: Le 2,072/kg; and cocoa: Le 5,888/kg.

(x) Achievement is as follows: cassava: Le500/kg; rice: 1,200/kg; and cocoa: Le10,000/kg) (rated as Moderately Unsatisfactory: 3)

(xi) Overall, for numeric ease, we have an **average rating of 2.67**

(e) The **weighted average rating for PDO achievement turns out to be 4.05** (0.41*3.3+0.59*5) OR Moderately Satisfactory, based on disbursement weight 41:59 for pre- and post-restructuring phase.

(f) On a four point rating scale of Low-Modest-Substantial-High, **the PDO achievement is rated as Substantial**.

(B). Split Rating calculation summary

Given the three indicators noted above, the ratings are as follows:

	Pre-AF rating/score	Post-AF rating score
Productivity	MU/3	S/5
Sale Price	MU/3	S/5
Beneficiaries	U/2	S/5
Total	8	15
Average score	2.67	5
Weight (pre-AF as to total disbursement)	0.41	0.59
Weighted average score	1.09	2.95
	=4.05 out of 6.0 OR MS	

This score relates to a Substantial performance rating for PDO (4.05 divided by 6 = 0.68 which when multiplied by 4 – four point scale (Low-Modest-Subs-High) for PDO – gives us a score of 2.7 out of 4, which corresponds to Substantial rating for PDO)