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The World Bank**

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IMPLEMENTATION COMPLETION AND RESULTS REPORT
ON A
CREDIT
IN THE AMOUNT OF SDR 100.2 MILLION
(USD 146 MILLION EQUIVALENT)

WITH A
GRANT
FROM THE RWANDA AGRICULTURE PROGRAM-FOR-RESULTS MULTI-
DONOR TRUST FUND
IN THE AMOUNT OF USD 59.84 MILLION
TO THE
REPUBLIC OF RWANDA
FOR A
TRANSFORMATION OF AGRICULTURE SECTOR PROGRAM PHASE 3
PROGRAM-FOR-RESULTS
March 25, 2019

Agriculture Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 25, 2019)

Currency Unit	=	SDR
SDR .72	=	US\$1
US\$1	=	RWF 891

FISCAL YEAR

January 1-December 31

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AgriTAF	Agriculture Technical Assistance Facility
ASIP	Agriculture Sector Investment Plan
ASWG	Agriculture Sector Working Group
BNR	National Bank of Rwanda
CAADP	Comprehensive Africa Agriculture Development Program
CEO	Chief Executive Officer
CPS	Country Partnership Strategy
KPI	Key Performance Indicator
CSO	Civil Society Organization
DfID	Department for International Development of the United Kingdom
DLI	Disbursement Linked Indicator
EBA	Enabling Business for Agriculture
EDPRS 2	Second Economic Development and Poverty Reduction Strategy Paper
ESIM	Environmental and Social Implementation Manual
ESMS	Environmental and Social Management System
ESSA	Environmental and Social Systems Assessment
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FSA	Fiduciary Systems Assessment
GDP	Gross Domestic Product
GoR	Government of Rwanda
GRM	Grievance Redress Mechanism
Ha	Hectare
ICR	Implementation Completion and Results Report
IFAD	International Fund for Agriculture Development
IP	Implementation Progress
IPAR	Institute for Policy Analysis and Research
IPCC	Intergovernmental Panel on Climate Change
IPF	Investment Program Financing
IRA	Integrated Risk Assessment
ISM	Implementation Support Mission
ISR	Implementation Status Report
LWH	Land Husbandry, Water Harvesting and Hillside Irrigation Project
MDTF	Multi-Donor Trust Fund
M&E	Monitoring and Evaluation

MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MINECOM	Ministry of Trade and Industry
MINIRENA	Ministry of Natural Resources
MIS	Management Information System
NAEB	National Agriculture Export Development Board
NGO	Non-Governmental Organization
NISR	National Institute of Statistics Rwanda
O&M	Operation and Maintenance
PAD	Program Appraisal Document
PAP	Program Action Plan
PDO	Program Development Objective
PER	Public Expenditure Review
PMO	Prime Minister's Office
PforR	Program for Results
PforR 2	Transformation of Agriculture Sector Program 4 Phase 2 (P161876)
PP	Program Paper
PSF	Private Sector Federation
PSTA 3	Third Phase of the Transformation of Agriculture Sector Program
RAB	Rwanda Agriculture and Animal Resources Development Board
RCA	Rwanda Cooperative Agency
RDB	Rwanda Development Board
RSSP	Rural Sector Support Project
SAS	Seasonal Agricultural Survey
SDR	Special Drawing Rights
SPIU	Single Project Implementation Unit
TA	Technical Assistance
TIR	Transparency International Rwanda
TOC	Theory of Change
USD	United States Dollar

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DATA SHEET

BASIC INFORMATION	
Product Information	
Project ID P148927	Program Name Transformation of Agriculture Sector Program Phase 3 PforR
Country Rwanda	Financing Instrument Program-for-Results Financing
Organizations	
Borrower Ministry of Finance and Economic Planning	Implementing Agency Ministry of Agriculture and Animal Resources
Program Development Objective (PDO)	
Original PDO To increase and intensify the productivity of the Rwandan agricultural and livestock sectors and expand the development of value chains PDO as stated in the legal agreement	
Revised PDO NA	

FINANCING				
	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)	
World Bank Financing				
IDA-55480	100	100	93.39	
IDA-59620	NA	46	47.49	
TF-19208 ¹	NA	50.60	50.60	
TF-A6465 ²	NA	9.24	9.24	
Total	100	205.84	200.72	
IDA (LWH, RSSP, FRDP)	194	298.97	248.86	
Non-World Bank Financing				
Borrower	300		368.4	
EU	160		110.5	
USAID	138		127.0	
IFAD	120		50.7	
DFID	90		7.76	
Netherlands	10		9.1	
Swiss	6		1.7	
Japan/JICA	32		20.9	
AfDB	20		70.7	
FAO	30		1.9	
Total	906		768.66	
Total Program Cost	1200		1218.24	

KEY DATES				
Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
31-Oct-2014	11-Dec-2014	21-Sep-2015	31-Mar-2018	30-Sep-2018

RESTRUCTURING AND/OR ADDITIONAL FINANCING		
Date(s)	Amount Disbursed at Restructuring/AF (US\$M)	Key Revisions
28-Feb-2017	96.4 (IDA Credit) 44.5 (TF-19208)	DLI 8 added and extension of targets

5. KEY RATINGS

¹ MDTF financing provided by DfID.

² MDTF financing provided by DfID and the Dutch Government as part of Additional Financing.

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Moderately Satisfactory	Modest

RATINGS OF PROGRAM PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
1	01-May-2015	Satisfactory	Satisfactory	IDA-55480: 19.44
2	04-Nov-2015	Satisfactory	Satisfactory	IDA-55480: 66.27 TF-19208: 15.18
3	14-Nov-2015	Satisfactory	Moderately Satisfactory	IDA-55480: 66.27 TF-19208: 15.18
4	02-May-2016	Satisfactory	Moderately Satisfactory	IDA-55480: 66.27 TF-19208: 29.11
5	28-Sep-2016	Satisfactory	Moderately Satisfactory	IDA-55480: 66.27 TF-19208: 29.11
6	21-Nov-2016	Moderately Satisfactory	Moderately Satisfactory	IDA-55480: 90.05 TF-19208: 29.11
7	02-Jun-2017	Satisfactory	Satisfactory	IDA-55480: 90.57 IDA-59620: 30.83 TF-19208: 44.55
8	14-Jan-2018	Satisfactory	Satisfactory	IDA-55480: 93.39 IDA-59620: 47.49 TF-19208: 50.13
9	30-Nov-2018	Satisfactory	Satisfactory	IDA-55480: 93.39 IDA-59620: 47.49 TF-19208: 50.60 TF-A6465: 9.24

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Crops	30%
Irrigation and drainage	15%
Agro-industry, marketing, and trade Microfinance (15%),	30%
Animal production (10%)	15%
	10%

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Rural services and infrastructure	20%

Rural markets	20%
Rural nonfarm income generation	20%
Other financial sector development	20%
Export development and competitiveness	20%
Gender is mainstreamed in all of these themes	

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I. PROGRAM CONTEXT AND DEVELOPMENT OBJECTIVES

I.A. Context at Appraisal and Theory of Change

Context

1. Rwanda made a remarkable transition from genocide to peace and development. Between 2000 and 2012, Gross Domestic Product (GDP) growth averaged 8.1 percent per year and poverty headcount was reduced from 59 percent to 45 percent. Agricultural development was a key driver for these achievements. The sector accounted for 35 percent of the GDP and for 45 percent of total poverty reduction (World Bank, 2013).

2. Despite these positive developments significant challenges remain. Rwanda is a small landlocked country (land area of 26,338 km²) with the highest population density in Africa (416 people per km²) and hilly terrain (which covers 85 percent of the total mass). Poverty is still mostly a rural phenomenon: 49 percent of the poor live in rural areas. Some 20 percent of Rwandan households remain food insecure. Rwanda has yet to meet its agricultural production potential. Yields of major crops are estimated to be at 40-50 percent of their productivity potential. A contributing factor is small farm size – on average a rural household cultivates 0.6 ha. The projected increase in the rural population – an estimated additional 2.5-3.5 million people by 2032 – is likely to add even more pressure on land resources.

3. Rwanda's Vision 2020 articulates key priorities for the country's development by the year 2020. This vision is further laid out in the Second Economic Development and Poverty Reduction Strategy Paper (EDPRS 2), which sets agriculture as a key sector for inclusive growth and poverty reduction. As part of EDPRS 2, the Third Phase of the Transformation of Agriculture Sector Program (known by its French acronym, PSTA 3) was approved by Cabinet in July 2013.³

4. PSTA 3 is a five-year government program covering the period 2013/14 – 2017/18. The objectives of the program are to: (i) transform Rwandan agriculture from a subsistence sector to a market-oriented, value-creating sector; and (ii) grow as rapidly as possible, both in relation to production and commercialization, in order to increase rural incomes and reduce poverty. PSTA 3 comprises four programs and 24 sub-programs. The four programs are: (i) agriculture and animal resource intensification; (ii) research, technology transfer and organization of farmers; (iii) private sector-driven value chain development and expanded investments; and (iv) institutional results-focused development and cross-cutting issues. PSTA 3 covers the entire country and targets the nation's 7.5 million farmers. The Agriculture Sector Investment Plan (ASIP) estimated the costs of the program to be approximately USD 1.2 billion.

Rationale for PforR support, and Program scope and boundaries

5. The Transformation of Agriculture Sector Program Phase 3 Program for Results (Agriculture PforR) was designed to contribute to the financing of PSTA 3. Thematically the PforR provided horizontal financing, i.e. it supported all four PSTA 3 programs and its 24 sub-programs. The four intermediate results areas of the Agriculture PforR were identical with the four PSTA 3 programs. In order to ensure orientation towards strategic PSTA 3 results, the disbursement-linked indicators (DLIs) and other key performance indicators (KPIs) of the PforR focused on six key "transformational drivers" of inclusive agricultural growth.⁴ At appraisal, it was indicated that the PforR was initially meant to

³ PSTA 3 was also guided by the Comprehensive Africa Agriculture Development Program (CAADP). Rwanda was the first country to sign a CAADP Compact.

⁴ These "transformational drivers" are: land husbandry, technology and research, agricultural finance, private sector value chain development, market-oriented infrastructure, and institutional development.

support the first three years of PSTA 3 implementation with potential additional financing for the last two years. Also, geographically, the PforR set no limits to the coverage of PSTA 3, which included all 30 districts of Rwanda. Hence, overall the Agriculture PforR is strongly aligned with the government program and provides broad support for PSTA 3 implementation. More details regarding program design, including the PDO, DLIs and the four intermediate results areas are provided in the remaining sections of this chapter and chapter II.B. The complete Results Framework can be found in Annex 6.⁵

6. The Technical Assessment, the Fiduciary Systems Assessment (FSA) and the Environmental and Social Systems Assessment (ESSA) were used to define the scope of the operation. Based on the findings of these assessments the Integrated Risk Assessment (IRA) and the Program Action Plan (PAP) were prepared (see Annex 5 for the complete PAP). The Technical Assessment pointed out that (i) private sector development is a key requirement for agricultural growth, and (ii) investments into irrigation, soil fertility, and technology are financially and economically highly attractive. The Assessment also recommended PSTA 3/PforR implementation by MINAGRI, in line with its organizational and functional structure and actors: four departments, two semi-autonomous implementation entities (Rwanda Agriculture and Animal Resources Development Board and National Agriculture Export Development Board), three Single Implementation Units and 30 districts. The FSA focused on financial management, procurement, and fraud and corruption risk considerations. Various risks were identified and mitigation measures included in the IRA and PAP, particularly related to capacity building at national and decentralized levels. The ESSA assessed the strengths, gaps, opportunities and risks of the existing system against ESSA core principles defined by the World Bank PforR Policy (2015c). The development of an Environmental and Social Implementation Manual (including training at national and district level) was included in the PAP. Further details on risk identification and measures are provided in section III.A.

7. At the time of approval, the rationale for the choice of the PforR instrument mainly related to strong country and government systems, such as fiduciary systems, governance and anti-corruption systems, social and environmental systems and technical capacities. It was argued that these strong systems were the result of continuous and long-term World Bank support of PSTA 1 and 2 based on previous and on-going Investment Program Financing (IPF) operations, such as the Land Husbandry, Water Harvesting and Hillside Irrigation Project (LWH) and the Rural Sector Support Project (RSSP) 1-3. The PforR instrument would provide the opportunity to build on these achievements and further strengthening country and government systems.

Program Development Objectives

8. The Program Development Objective (PDO) of the Agriculture PforR was *to increase and intensify the productivity of the Rwandan agricultural and livestock sectors and expand the development of value chains.*

Key expected outcomes and outcome indicators

9. This PDO can be “unpacked” into two objectives: (i) increase and intensify productivity of the Rwandan agricultural and livestock sectors; and (ii) expand the development of value chains. According to the Program Appraisal Document (PAD), PDO Indicator 1 “increased agricultural land under modernized agricultural technologies” was used to assess the achievement of the “productivity objective”. While this indicator can be used as a proxy for assessing productivity, it does not assess productivity directly. Therefore, the Implementation Completion and Results Report (ICR) uses mainly the increase of yields of major crops and livestock products to analyze whether the “productivity objective” of the PDO has been achieved.

⁵ Further details regarding program design can be found in the Program Appraisal Document (PAD).

10. PDO indicator 2 “increased agricultural exports” was meant to assess the “value chain development objective” of the PDO. The challenge with this indicator is that exogenous factors out of control of the program (i.e. world market prices) have a significant impact on its achievement. Hence, the ICR considers additional indicators to assess the achievement of this PDO objective. KPI 7 (increased value of major competitive value chains), KPI 8 (DLI 5 – on increases in agricultural finance lending), KPI 9 (on increased private investments) and KPI 10 (on percentage of agricultural production marketed) constitute indicators commonly used to measure value chain development and are therefore deemed appropriate for this purpose.

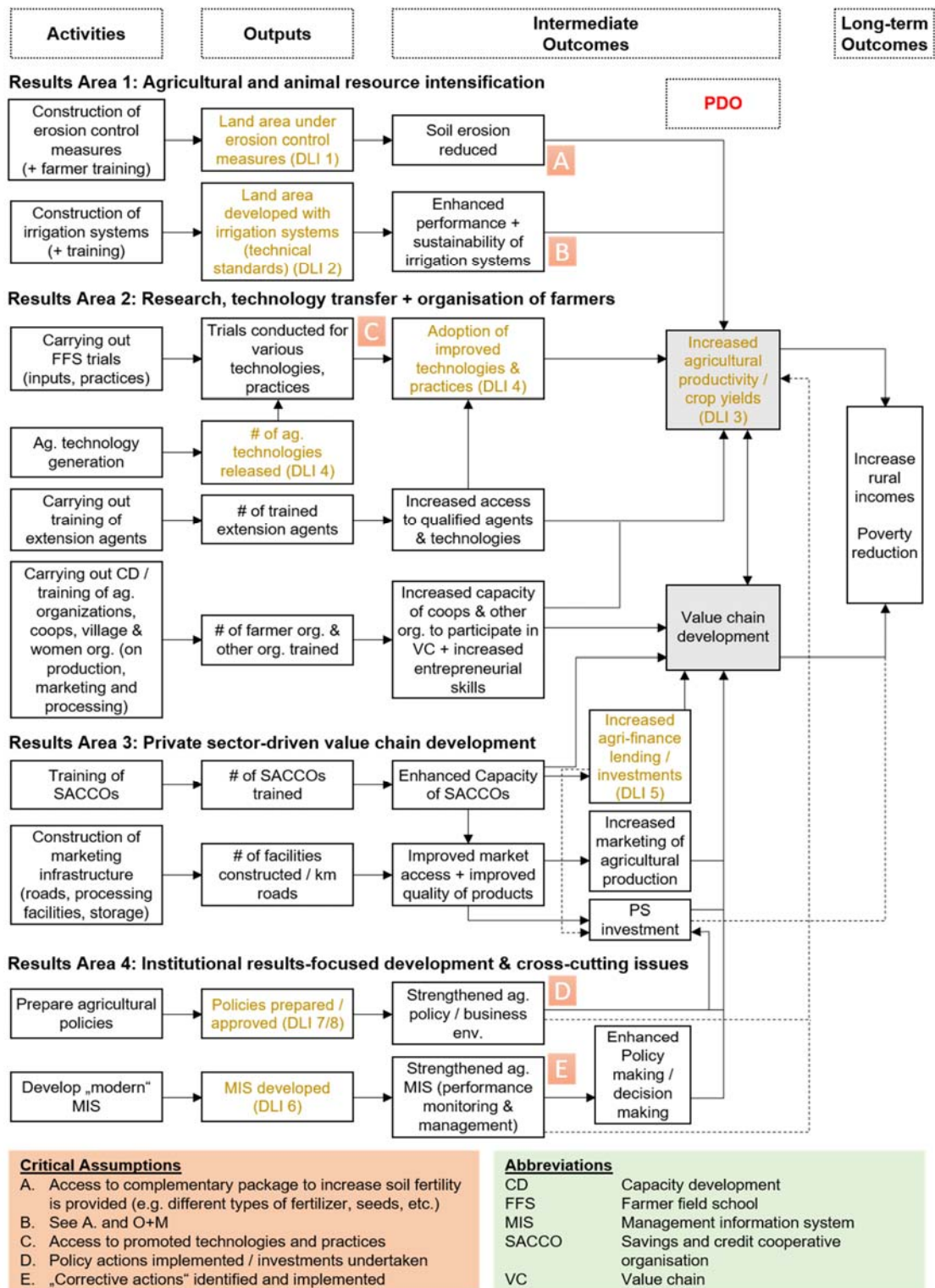
Theory of change (results chain)⁶

11. Figure 1 illustrates the Theory of Change (TOC) as derived from the PAD and other preparation documents. In general, it shows clear causal linkages between activities, outputs, intermediate outcomes (the PDO), and longer-term outcomes.⁷ Overall, the PDOs are addressed by clear results chains grouped into four intermediate results areas: (i) agricultural and animal resource intensification; (ii) research, technology transfer and organization of farmers; (iii) private sector-driven value chain development; and (iv) institutional results-focused development and cross-cutting issues. As an example, the construction of erosion control measures, combined with farmer training (activity), leads to increased land area under erosion control measures (output) and thereby to reduced actual soil erosion (outcome). Based on the assumption that other critical inputs (e.g. fertilizer and seeds) are accessible, productivity/crop yields (PDO) will increase, ultimately contributing to increased rural income and reduced poverty (longer-term outcomes).

⁶ Since the PforR provided horizontal support to a large and complex government program, the TOC illustrated in the ICR focuses on the major results chains covering the DLIs and key intermediate outcomes. An even more comprehensive and complex illustration of the TOC was not considered to be helpful for the ICR.

⁷ Section IV.A. below discusses some challenges related to the TOC.

Figure 1: Theory of Change Transformation of Agriculture Sector Program Phase 3 PforR



Program Results Areas and DLIs

12. Table 1 provides the list of DLIs for each Results Area. All DLIs were imbedded in the theory of change diagram (Figure 1). Further details on the DLIs are discussed in Section II.A Relevance. Annex 6 provides the complete Results Framework, including targets and actual values for the KPIs/DLIs throughout the implementation period.

Table 1: Intermediate Results Areas and DLIs

Intermediate Results Area	DLI
Intermediate Results Area 1: Agriculture and Animal Resource Intensification	DLI 1: Annual increase of land protected against soil erosion, based on agreed technical standards
	DLI 2: Annual increased in irrigation area in hillsides and marshlands based on agreed technical standards
	DLI 3: Increases in average crop yields for cassava (food crop), coffee (export crop) and milk
Intermediate Results Area 2: Research, technology transfer and organization of farmers	DLI 4: Number of enhanced innovation technologies introduced by public and/or private sector, and adopted by farmers
Intermediate Results Area 3: Private sector-driven value chain development and expanded investments	DLI 5: Percentage increase in agricultural finance lending for agriculture sector (production, processing, agro-processing)
Intermediate Results Area 4: Institutional results-focused development and strategic cross- cutting issues	DLI 6: Updated gender-sensitive MIS framework and Action Plan for agricultural sector approved, implementation initiated, and fully operational
	DLI 7: Approval of seeds, fertilizer and finance policy, implementation of action plans

I.B. Significant Changes during Implementation

Revised PDOs, Outcome targets, Results areas, and DLIs

13. In March 2015, a Multi-Donor Trust Fund (MDTF) of USD 50.6 million was approved to support the implementation of the PforR. Additional Financing (AF) in the amount of USD 46 million for the Credit and another USD 10 million for the MDTF and restructuring was approved on February 28, 2017. The PDO remained unchanged. The rationale was to expand the scope of the program by scaling-up targets for PDO indicators and DLIs. More specifically, the following changes to the DLIs⁸ were introduced:

- (i) Scaling-up of targets for DLIs that focused on increased productivity (DLIs 1-4)
- (ii) Rolling-out the Management Information System (MIS) to 30 districts (DLI 6)
- (iii) Review and adjust the three sub-sector policies on seeds, fertilizers and finance to ensure alignment with the new National Agricultural Policy (NAP) (DLI 7)
- (iv) Introduction of a new DLI focused on the approval of an updated NAP (new DLI 8)
- (v) No further disbursement allocation was provided to DLI 5 on agricultural lending to farmers and agricultural enterprises with the argument that the Government of Rwanda (GoR) was satisfied with the results achieved up to year 3 of implementation.

14. As a means to achieve this scaling-up through the final two years of PSTA 3, the closing dates for both the Credit and the MDTF were extended to September 30, 2018. Further, the submission

⁸ Table 7 on page 15 of the Program Paper of the AF/restructuring provides the changes to the DLIs in detail.

deadline for audited financial statements was extended from six months to nine months following the end of the fiscal year. AF was also supposed to offset foreign exchange rate losses that resulted from the depreciation of the SDR to the USD. At the time of AF/restructuring, also the PAP was modified by introducing seven new actions in area 4 “Fiduciary, Environmental and Social Systems”.

Rationale for changes and their implications for the original theory of change

15. The rationale for the changes to the DLIs given in the Program Paper (PP) of AF and restructuring include support of ongoing efforts by the GoR towards (i) expanding and sustaining productivity gains; and (ii) strengthening private sector development. These changes do not affect the theory of change.⁹

⁹ In addition to these changes to the DLIs, for two KPIs the end targets were revised downwards at the time of restructuring. KPI 9 (on increased private sector investments) and KPI 10 (on increased percentage of agriculture production marketed) were reduced with the argument that they were impacted by the severe drought in Eastern Province and heavy rainfall in Kigali Province.

II. OUTCOME

II.A. Relevance

Relevance of PDO

16. Overall, the PDO clearly states the outcomes to be achieved.¹⁰ The Country Partnership Strategy (CPS) FY2014-2018 covers the entire implementation period of the PforR.¹¹ The PforR is strongly aligned with the CPS, in particular with respect to CPS Theme 2 “*improving productivity and income of the poor through rural development and social protection*”. The wording of the PDO and the definition of PDO/intermediate outcome indicators confirm this strong CPS alignment. CPS objective 5 focuses on improved agricultural productivity and sustainability. Increasing productivity is one of two explicit objectives included in the PDO. Two key CPS outcome indicators (area under irrigation and land developed with terraces) are identical with two KPIs/DLIs (KPI 1/DLI 1 and KPI 2/DLI 2) of intermediate results area 1 of the PforR.

17. CPS objective 7 focuses on improved agricultural value chains. Expanding the development of value chains is the second explicit objective included in the PDO. Further, two key CPS outcome indicators (production of priority food crops increased and increase of value addition captured within country for coffee and tea export crops) are closely related not only to PDO indicator 2, but also two KPIs and one DLI (KPIs 3/DLI 4 and KPI 7). Hence, one can draw the conclusion that the operation’s development objective is consistent with the Bank CPS. Finally, the PDO of the successor program PforR 2, which supports government’s PSTA 4, is to “*promote the commercialization of agriculture value chains in Rwanda*” and is therefore very much aligned with the PDO of the PforR. The fact that PforR 2 already became effective during the final implementation stages of the PforR also indicates the relevance of the PforR PDO at closing.

Rating Relevance of PDO: High (Full alignment between Program objectives and CPS objectives)

Relevance of DLIs

Definition of DLIs

18. At the time of approval, the PforR included seven DLIs. As part of AF and restructuring, a new DLI 8 on the approval of an updated NAP was introduced (see also Section I.B). All DLIs have been clearly defined and are measurable.¹²

19. Overall, the DLIs provide adequate incentives for performance and facilitate the necessary flow of funds to move implementation forward. Each DLI has been overachieved throughout program implementation, even after targets for DLIs 1-4 have been scaled-up.¹³ This implies that the DLIs were feasible to achieve.

¹⁰ The second PDO “expand the development of value chains” is a bit vague. The actual meaning becomes clearer when looking at the relevant PDO and intermediate outcome indicators, such as increased private sector investments, increased marketing of agricultural produce, increased exports and increased agricultural lending.

¹¹ In a strict sense, the period from July 1 – September 30, 2018, is not covered by the CPS FY2014-2018. However, this short time period of 3 months can be neglected, in particular since new CPS has not been approved as of September 30, 2018.

¹² The PAD Annex 3 and the Program Paper for AF and restructuring Annex 2 provide details regarding DLI definition, timeline for DLI achievement, amounts allocated to each DLI, a clear verification protocol (including procedures for verification for each DLI), and a DLI disbursement table (including details on prior results, advances, and minimum values to be achieved for full disbursement).

¹³ DLI 3 on coffee yields was slightly below target in 2016/17.

20. The Credit disbursed 66 percent after less than one year of effectiveness. After less than two years, the disbursement rate of the Credit was 90 percent. The disbursement rates of the MDTF were similarly high.¹⁴ The combination of (over) achievements of results, disbursement against prior results, and advances led to this front-loaded disbursement.¹⁵ The strong commitment by the government to implementing PSTA 3, resulting in the front-loading of the disbursements had no negative impacts. Continuous progress on the DLIs was made, even after the threshold of 75 percent to trigger full disbursement has been met. The prospect of AF might have provided an additional incentive.

21. Five of the original seven DLIs are fully scalable.¹⁶ Having a significant proportion of scalable DLIs is certainly recommendable to provide incentives for performance and ensure adequate disbursement allowing for sound program implementation. For all DLIs, it was foreseen that payments will be made in proportion to the achievements.

Integration between the DLIs and the results framework

22. There is clear coherence between the results frameworks of PSTA 3/PforR and the DLIs. All seven original DLIs are also KPIs of the PforR results framework. Six of those also constitute KPIs of the PSTA 3 results framework. The advantage of this coherence is that the attention to the DLIs (since they trigger disbursement) automatically led to an incentive to achieve the envisaged PforR and PSTA 3 results.

23. The DLIs are well embedded in the Theory of Change (see Figure 1). All DLIs are critical outputs, intermediate and PDO outcomes in the results chain leading to the desired objectives. Having this combination of outputs and outcomes is adequate, since it provides incentives to address key issues at different “stages” of the results chain. Important to note is also that – according to the section on efficacy below – DLI 3 on increased crop and milk yields constitutes a PDO indicator. Hence, this DLI provides direct incentives to reach the PDO.

24. DLIs 1-3 are included in the intermediate results area 1 “agriculture and animal resource intensification” and DLI 4 in the intermediate results area 2 “research, technology transfer, and organization of farmers”. These four DLIs relate directly to the “productivity objective” of the PDO. Given the results chain logic, this “productivity objective” would not be reached without reaching these DLIs. 60 percent of the funds have been allocated to DLIs 1-4.¹⁷

25. Results area 3 “private sector-driven value chain development and expanded investments” is closely linked to the “value chain development” objective of the PDO. DLI 5 (on agricultural finance) directly represents this results area. Further, DLI 7 (on agricultural policies) and DLI 8 (on the National Agriculture Policy) of results area 4 “institutional results-focused development and strategic cross-cutting issues” also provide a strong foundation for private sector development, in particular given the nascent stage of the sector. Beyond facilitating private sector development, these policies certainly constitute a critical and necessary condition for the development of the Rwandan agricultural sector overall. In total, 40 percent of the funds of the Credit and the MDTF have been allocated to DLIs 5-8. DLI 7 on agricultural policies is – together with DLI 1 – the DLI with the most significant allocation of all DLIs accounting for 20 percent of the total funds.

Incentives for improving institutional performance and results

¹⁴ In less than one year after effectiveness, 58 percent of the funds were disbursed. In November 2016 (approximately 1.5 years after effectiveness), the disbursement rate was 88 percent.

¹⁵ From the USD 100 million of the original Credit, USD 25 million and USD 5 million were allocated for prior results and advances respectively.

¹⁶ From the original seven DLIs, only DLI 6 on the MIS and DLI 7 on the agricultural policies cannot be considered as fully scalable. As part of AF, DLI 5 on agricultural lending was dropped and a new DLI on the updated NAP was introduced. Hence, from that stage onwards only four out of seven DLIs were fully scalable.

¹⁷ Including AF of both the Credit and the MDTF.

26. Out of the seven original DLIs, two DLIs can be classified as “capacity building and development”. With the restructuring, the allocation shifted slightly. The “capacity building” category increased to three DLIs. With respect to resource allocation, 33 percent of the funds are allocated to this category. Further, the DLIs addressed the PSTA 3 key transformational drivers of inclusive agricultural growth.¹⁸

27. While the DLIs certainly indicate an emphasis of the PforR on achieving visible and tangible outcomes in the agriculture sector, there is still sufficient consideration of the DLIs on strengthening country systems and institutional development. The latter is a key feature of the PforR instrument and also affects sustainability of the operation. Fiduciary aspects figure prominently in the PAP. 14 of the 25 PAP actions are related to fiduciary aspects.¹⁹

Rating Relevance DLIs: High (There is full alignment between the DLIs and the PDO. There are no shortcomings in quality elements of the DLIs).

Rating of Overall Relevance: High

II.B. Achievement of the PDOs (efficacy)

Assessment of Achievement of each Objective or Outcome

Objective 1. Increase and intensify productivity

28. According to the PAD, the “productivity objective” of the PDO is supposed to be assessed by PDO indicator 1 (the share of agricultural land under modernized technologies). This indicator certainly constitutes a useful proxy, but it does not measure productivity directly. Yield increases (DLI 3) constitute a more appropriate and direct indicator. Therefore, the ICR bases its analysis on the extent to which DLI 3 has been reached which reported on productivity levels for major crops and livestock commodities. Crops/commodities covered by DLI 3 include cassava, coffee and milk, which have all significant importance for agricultural development and food security in Rwanda. Cassava is a key staple food and carbohydrate source. It accounts for 18 percent of the agricultural GDP, 13 percent of the labor force working in agriculture, and 24 percent of the cultivated land. Coffee is the most important export crop. The export earning amounted to more than USD 60 million in 2015/16 accounting for 21 percent of agricultural export earnings. The dairy subsector is the largest segment of the livestock sector and accounts for 15 percent of the agricultural GDP. Milk plays a key role in Rwanda’s strategic approaches to increase food security.

29. Table 2 illustrates yield levels for coffee, cassava and milk (DLI 3/KPI 3) as reported by the ISRs and Borrower ICR. Yield levels have been consistently above their targets.²⁰ Table 3 indicates targets and actual values for PDO indicator 1. While the end target has been missed only by a very narrow margin, there has been a continuous positive development of land area under modernized technologies from 19 percent in 2013/14 to 31 percent in 2016/17. This positive assessment of productivity is also supported by the overachievements of DLI 1 (on soil erosion protection on more than one million hectare), DLI 2 (on irrigated land on close to 50,000 hectare) and DLI 4 (on number

¹⁸ The DLIs were selected in a balanced manner to provide incentives for those drivers: (i) land husbandry (DLI 2 and 3); technology and research (DLI 4); (iii) agriculture finance (DLI 5); (iv) private sector value chain development (not addressed directly, partly by DLI 5, 7 and 8); (v) market oriented infrastructure (DLI 1 and 3); institutional development (DLI 6 and 7).

¹⁹ At restructuring, the PAP was amended to a total of 25 actions. The PAP of the original Credit had 18 actions of which eight were related to fiduciary aspects.

²⁰ Minor exception is that the coffee yield has been slightly below target in 2016/17.

of innovative technologies introduced (6) and adopted (adoption rate of more than 50 percent)) – see Annex 6. As indicated in the TOC (Figure 1), those practices and technologies are important elements of the results chain leading to productivity increases. Further, the completed PAP actions 3.1, 3.2, and 3.3 on introducing and monitoring adequate operation and maintenance of rural infrastructure (including capacity development of farmer organizations) can be assumed to have contributed to the achievement of the productivity objective (see Annex 5 for the PAP).

30. The DIME Evaluation of the LWH Project (World Bank, 2018d), which is also included in the PSTA 3 Finance Plan, shows similar positive results. DIME found statistically significant impacts on crop yields due to adoption of irrigation, erosion control and other technologies. In particular, due to the yield increases evidenced by DLI 3, **it can be concluded that PDO 1 has been fully met.**

Table 2: Targets and achievements of DLI 3 (yields cassava, coffee, milk)

		2013/14	2014/2015	2015/2016	2016/2017
Cassava	Target (MT/ha)	16	17	18	19
	Actual (MT/ha)	16.3	17.8	19	19
Coffee	Target (kg/tree/year)	2.3	2.5	2.7	2.9
	Actual (kg/tree/year)	2.4	2.6	2.8	2.8
Milk	Target (ltr/cow/day)	4.5	5.0	5.5	6.2
	Actual (ltr/cow/day)	5.1	5.7	5.7	6.3

Source: World Bank (2018c)

Table 3: Targets and achievements of PDO Indicator 1

	2013/14	2014/15	2015/16	2016/17
TARGET: % of agricultural land area under modernized agricultural technologies	24%	27%	31%	34%
ACTUAL: % of agricultural land area under modernized agricultural technologies	19%	23%	24%	31%

Source: World Bank (2018c)

Objective 2. Expand the development of value chain

31. According to the PAD, the second PDO objective “value chain development” was supposed to be measured by PDO indicator 2, i.e. percentage increase in value of agricultural export commodities (coffee, tea, pyrethrum and horticulture). As pointed out in Section I.A on Key Expected Outcomes and Outcome Indicators, this indicator is very much impacted by exogenous factors (i.e. world market prices) outside of the control of the program. Therefore, this indicator has its limitations for the assessment of the second PDO. Table 4 indicates that the values of PDO indicator 2 indeed fluctuated significantly over time²¹ and that in 2016/17 the actual value misses the target value only by a very narrow margin. While beyond the agreed reporting period for this indicator, it is interesting to note that in 2017/18, the increase in value of exports amounted to 45 percent and is therefore well above the target for 2016/17.

²¹ Rwanda experienced a 20 percent drop in the price of coffee from 2014-15 to 2015-16.

Table 4: Targets and actuals of PDO 2 indicator (percentage increase in value of export agricultural commodities)

Total Annual Percentage Change	2013/14	2014/15	2015/16	2016/17 (Final target)	2017/18
Target %	23	24	25	25	NA
Actual %	7	21	6	23	45%

Source: Borrower ICR

32. Due to these constraints related to PDO indicator 2, the ICR considers the achievements of KPI 7 (increased value of major competitive value chains), KPI 8 (DLI 5 – on increases in agricultural finance lending), KPI 9 (on increased private investments) and KPI 10 (on percentage of agricultural production marketed) in addition to assess whether the second PDO objective has been achieved. All of these indicators can be considered as appropriate for analyzing the extent of value chain development. Again, the TOC (Figure 1) illustrates that each of these four KPIs is crucial for achieving PDO 2.

33. Table 5 illustrates that KPI 9 (private sector investments) and KPI 7 (value of competitive value chains – exports) overachieved its targets. With respect to KPI 8 (DLI 5) the actual value of 2014/15 already surpassed the end target of 2015/16. One year later the actual value was slightly below that target. For KPI 10 (percentage of production marketed), the target is missed only by a narrow margin. The second element of KPI 7 (increased value of major competitive value chains – total production) experienced a continuous increase but the end target was not reached.

Table 5: Targets and actual achievements of KPI 7-10

Indicator		Baseline 2012	2013/14	2014/2015	2015/2016	2016/2017
KPI 7: Increased value of major competitive value chains, total production and exports (in m USD)	Target	--	2.600 154	2.900 176	3.200 198	NA
	Actual	2.300 132	2.398 223	2.440 272	2.532 290	NA ²²
KPI 8 (DLI 5): Increased agri-finance lending for farmers and agricultural enterprises (in m USD) ²³	Target	--	4.8	5.9	7.0	NA
	Actual	3.6	6.1	7.4	6.5	NA
KPI 9: Increased private sector investments in agriculture sector (in m USD)	Target	--	613	713	813	730
	Actual	513	580.2	622	679	759
KPI 10: Increased % of agric. production marketed	Target	--	29%	30%	31%	25%
	Actual	21% ²⁴	21%	21%	24%	23%

Source: Borrower ICR (based on data from NAEB, NISR, RDB, and BNR)

²² According to the AF Program Paper, PSTA 3 did not foresee any support for 2016/17.

²³ Reporting of this indicator was limited to agri-finance lending for farmers (lending for agricultural enterprises was not reported on consistently). Measurement of this indicator was not continued after AF, since the government expressed satisfaction with the results achieved by 2015/16.

²⁴ There was an error in the baseline of 28 percent as the MINAGRI study Enquête Intégrale sur les Conditions de Vie des ménages 3 (EICV 3) reported it at 21%. Thus, the baseline was corrected to 21 percent.

34. Furthermore, DLIs 7 and 8 (on agricultural policies) constitute important conditions for creating a more favorable environment for private sector value chain development (see TOC). The fact that the NAP and the three sub-sectoral policies on seeds, fertilizer and finance have been approved as envisaged, strengthens the argument that important achievements have been made regarding PDO 2. When assessing PDO 2, it is also important to note that the activities, outputs and outcomes contributing to the positive achievements related to productivity increases (PDO 1) also have a direct impact on value chain development as illustrated by the TOC. Overall, by looking at the level of achievements of KPI 7-10, PDO indicator 2 and DLIs 7 and 8, the ICR concludes that **PDO 2 was almost fully achieved.**

Implicit Objective. Improved institutional capacity and program system

35. The PforR contributed to the strengthening of government's systems, which is another implicit objective of the PforR instrument (PDO 3). The original PAP included 18 actions, and as part of the restructuring, seven additional actions were added. The 25 PAP actions were divided into five action areas, which are in line with the areas proposed by the World Bank (2011):

- (i) enhanced enabling environment and expand private sector roles and capacities (two actions)
- (ii) evolving public sector institutional roles and enhanced capacities (three actions)
- (iii) O&M challenges and requirements (three actions)
- (iv) Fiduciary, environmental and social systems (16 actions)
- (v) Expenditure and financing framework (one action)

36. The PAP actions are clearly derived from the three assessments and can be considered as being crucial to reach program objectives and DLIs. All PAP actions were completed eventually (see Annex 5). Important progress has been made concerning restructuring of Rwanda Agriculture and Animal Resources Development Board (RAB) and National Agriculture Export Development Board (NAEB). Relevant PAP actions completed include strategies for RAB and NAEB (including their implementation), and institutional analysis of key units and delivery agencies (including RAB). In addition, the Agriculture Public Expenditure Review (PER) and the eProcurement System helped to inform and focus the reform process. O&M challenges regarding rural infrastructure have been addressed through ensuring that adequate O&M mechanisms are in place, capacity development and monitoring. While the challenges concerning O&M have not been resolved completely, it is plausible to assume that efficiency, effectiveness and sustainability of relevant program investments have improved.

37. Fiduciary systems have been strengthened, for example by capacity development at national and decentralized levels, by implementing the eProcurement System and by implementing a Grievance Redress Mechanism. All these measures are likely to enhance efficiency of interventions. The PER also strengthened the capacity of the government to ensure that public resources are allocated to public goods, e.g. in the context of private sector development. Finally, a transparent MIS has been established (which was not a PAP action, but a DLI). The MIS has enabled the government (MINAGRI) to do "corrective actions" during PforR/PSTA 3 implementation, including on budget allocations to DLIs, based on a more comprehensive and timely understanding of sectoral developments.

38. Some challenges remain. Continuous capacity development of front line staff on technical, safeguards and fiduciary aspects is needed (UNIQUE, 2017 and Risner, 2017). The repeated adverse audit opinions for RAB demonstrate that not all capacity gaps have been filled and that the institution faces challenges to cope with the significant increase of responsibilities in PSTA 3.²⁵ It is important to

²⁵ Risner (2017) also highlights organizational and human capacity constraints of MINAGRI.

note that these issues are being addressed as part of PforR-2. Further, as indicated in the ISRs and Aide Memoires the implementation of numerous PAP actions was delayed.²⁶ This delay limits the impacts on program efficiency and effectiveness to some extent, but longer-term impacts and sustainability beyond PforR implementation should also be acknowledged. The implicit objective of improved institutional capacity, e.g. strengthening of RAB, NAEB, and fiduciary, environmental and social systems, also contributed to PDO 1 and 2, as they build the institutional foundation for implementing the government's agriculture development PSTA 3 program plus any successor programs. The ICR concludes that the **implicit PforR Objective** of improved institutional capacity and program system **was almost fully achieved**.

Rating of Overall Efficacy: Substantial (the operation almost fully achieved its objectives)

II.C. Justification of Overall Outcome Rating

39. The overall outcome rating is “**moderately satisfactory**” (there are moderate shortcomings in the operation's achievements). The PDOs were either fully achieved (PDO 1) or almost fully achieved (PDO 2 and PDO 3). The relevance in terms of PDO and DLIs is high.

II.D. Other Outcomes and Impacts

Not applicable.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

III.A. Key Factors during Preparation

Design

42. Overall, all three assessments (technical, fiduciary systems, environmental and social systems) are comprehensive, provide in-depth analyses and relevant conclusions were drawn for program design. As foreseen by the World Bank PforR Policy (World Bank, 2015c), risks have been identified thoroughly and the findings have been integrated into the Integrated Risk Assessment (IRA) and PAP.

43. One shortcoming of the Technical Assessment²⁷ is that private sector development could have been analyzed more rigorously to help specify the results chain and interventions. In particular, the assessment could have been more realistic about what could be achievable during the implementation period given the nascent stage of the private sector and the institutional and political space provided. This is of particular importance, since (i) risks of various relevant sub-programs have been rated as “substantial”; and (ii) value chain development is one PDO objective.

44. At the same time, the Technical Assessment informed the design (and ultimately the results) of results area 1 positively by highlighting the capacities of relevant stakeholders to implement erosion control measures and irrigation systems, the financial attractiveness of these measures and their importance for increasing crop yields.

²⁶ 16 PAP actions were supposed to be completed by the end of 2015. However, 13 of these 16 actions had not been implemented by March 2016. Full completion of PAP actions was eventually reported during the ICR mission in September 2018 and confirmed by the Borrower ICR.

²⁷ To keep the ICR document short and concise, the focus here is on the Technical Assessment, since it reveals some constraints. The Fiduciary Systems Assessment and the Environmental and Social Systems Assessment are overall of good quality. Some aspects related to both assessments are raised further below in Sections III.A and IV.B).

Results Framework (including Monitoring Plan)

45. The PforR and PSTA 3 results frameworks are very coherent, which confirms the alignment of the Bank operation with the government program. All KPIs are simultaneously key results of the PSTA.

46. All KPIs have baseline values included in the PAD. Considering these values, generally the targets seem appropriate. Some indicators of the results framework are not SMART²⁸. As a consequence, difficulties arose with respect to their measurement. Recognizing this, the Bank team worked with the Ministry to adjust the methodologies and indicators used to make them more measurable during implementation. Examples include PDO indicator 1²⁹, KPI 6 (grading of farmer organizations), KPI 14 (women's empowerment index), and KPI 15 (households with acceptable levels of food consumption). The fact that the PSTA 3 results framework was never formally validated probably led to reduced emphasis on fully reporting on PSTA 3 status and progress and to delays in adapting methodological approaches for the quantification of indicators.

47. Data collection for PSTA 3 indicators – and hence all PforR indicators – was organized around the updated Management Information System (MIS). The updated MIS itself was actually also a DLI. Responsibilities for data collection, data sources and periods for data collection have been clearly specified in the PAD.

DLI verification protocol

48. The PAD includes a clear and detailed DLI Verification Protocol specifying DLI definition, scalability of disbursement, data source/responsible agency, verification agency, and procedure for verification. MINAGRI prepares a DLI Report and submits it to the Prime Minister's Office (PMO) for verification. The PMO submits the findings of the verification signed by the Prime Minister to the World Bank. The verification system has some commendable features, which demonstrate how serious the government takes the verification process. Of particular relevance here is that IPAR – an independent entity – evaluates the Imihigo System on an annual basis since 2013/14. The Imihigo System is the main data source being used by MINAGRI to report on the DLI status (plus other core indicators). A key characteristic of these evaluations is that IPAR also tracks progress on implementing recommendations of previous evaluations.

49. However, the verification system also faced the challenge that budget and human resources allocated to the verification by PMO were limited.³⁰ This arose because verification of program results is not a core mandate of PMO. Hence, its technical capacity is limited. These challenges were recognized and addressed as part of the design of PforR 2. The Office of the Auditor General (OAG) has been assigned the role of the verifying entity. OAG has proven in the past that it has the capacity to conduct verification of other programs.

Risk identification and measures

50. The overall IRA risk rating was "moderate". Considering the technical and fiduciary performance of PSTA 2, the experiences with LWH and RSSP, and the fact that other Development Partners (DPs) provided sector budget support for PSTA 2 (and PSTA 3) justifies this rating.

²⁸ SMART means that indicators should be specific, measurable, accepted, reasonable and time-bound.

²⁹ The methodology for measuring PDO indicator 1 was modified during implementation as described in the Aide Memoire of the third ISM from March 2016. First, concerning the categories of technologies considered, irrigation and soil erosion control measures were included (in addition to improved seeds, fertilizer, and mechanization) and differential weights used to arrive at a composite index. Second, the percentage of agricultural land covered by these technologies was used as opposed to their adoption by percentage of farm families.

³⁰ The verification is basically conducted by one staff plus an additional supervisor.

51. The “moderate” risk rating was also given to all the subcategories – technical, fiduciary, environmental and social, DLIs, and other risks. Given the comprehensiveness and thoroughness of these assessments, the rating of the last four subcategories seems adequate. With respect to the FSA, various risks were identified and included in the IRA. The original PAP included eight fiduciary-related risk mitigation measures, which is considered to be adequate given: (i) the overall reliance on country fiduciary systems by the PforR instrument; (ii) the responsibilities given to RAB and NAEB in midst of restructuring processes; and (iii) the ongoing decentralization process.³¹ The ESSA identified one PAP action: development of an Environmental and Social Implementation Manual (ESIM), including training at national and district level.³² The IRA included two additional risk mitigation measures: one is related to the inclusion of SMART indicators into PSTA 3, avoiding negative and social effects³³. The second mitigation measure is related to the follow-up on two regulatory actions, which might delay PforR implementation.³⁴

52. The IRA identified three DLI-related risks: (i) delays in erosion control and irrigation infrastructure, including insufficient O&M (DLIs 1 and 2); (ii) insufficient research-extension linkages affecting adoption of improved technologies (DLI 4); and (iii) delayed/insufficient response from the private sector to assume an expanded role (DLIs 5 and 7). Given the fact that all DLIs have been reportedly achieved, these risks have adequately been addressed or their risk level have been overestimated.³⁵

53. Concerning the Technical Assessment, a number of risks have been identified and addressed appropriately through the IRA and PAP.³⁶ However, numerous sub-programs related to private sector value chain development received a “substantial” risk rating. While the IRA identified both risks and broad categories of risk mitigation measures, these considerations could have been addressed more thoroughly as part of intermediate results area 3, in particular along the entire results chain (see also Section II.A on “Design” above). Climate change-related risks are considered to be “substantial”, but the assessment lacks explicit recommendations how these risks could be mitigated. Both IRA and PAP are silent about climate change issues. However, what is more important is that various DLIs and actual activities directly address climate risks. For example, increasing the area under terraces to reduce soil erosion and increasing the irrigated area can certainly be considered as “climate smart agriculture”.

Readiness for Implementation

54. The requirements of the World Bank PforR Policy (World Bank, 2015c) for PforR preparation were fully met. All required design elements, such as the results chain/Theory of Change, program definition, the three assessments, the PAP/IRA, results framework and DLIs have been elaborated on

³¹ Six additional fiduciary PAP actions were added as part of the restructuring.

³² As part of restructuring another PAP action was added to include issues of small dams in the ESIM.

³³ Some indicators have an element of environmental and social sustainability/inclusiveness (e.g. KPI 1, KPI 2, KPI 14, KPI 15). Five KPIs are disaggregated by gender. While it is not clear from the Program documents whether it was followed-up on the regulatory actions (on land policy and on protected areas), it can be concluded that they did not lead to delay of implementation.

³⁴ The first is the legislation of the land and expropriation policy, already updated and approved by the Cabinet, which should be approved by the Parliament prior to implementation. The second is the designation of National Parks, demarcation of buffer zones for protected forests, and demarcation of protection zones for rivers and lakes. The lack of clarity of these buffer and protection zones could potentially delay implementation.

³⁵ PAP area 3 adequately addressed the first risk with three concrete action. Given the positive results of PSTA 3, LWH and RSP, this risk might have also been overestimated. The field presence of RAB staff to close the research-extension gap has been reportedly addressed. The DLI 7 (and DLI 8 added as part of restructuring) on agricultural policies was completed.

³⁶ The PAP included area 1 (enhanced enabling environment and expanded private sector role and capacities) with two actions, area 2 (evolving public sector institutional roles and enhanced capacities) with 3 actions, and area 3 (O&M challenges and requirements) with 3 actions which address various identified risk appropriately.

in detail. The interactions between these design elements have been considered explicitly. The government program PSTA 3 was already under implementation.

III.B. Key Factors during Implementation

Factors subject to the control of government and/or implementing entities

Coordination and engagement

55. The roles and responsibilities between the implementing entities MINAGRI, RAB, NAEB, SPIUs and the districts have been clearly defined in the PAD and the PSTA 3 document.³⁷ These clear arrangements avoided administrative barriers that would have slowed down implementation. Continuous efforts were made concerning the restructuring of RAB and NAEB. Coordination between the government and DPs worked well as part of the Agriculture Sector Working Group (ASWG) as confirmed by all stakeholders in key informant interviews. Also confirmed in interviews was the relatively low engagements of private sector representatives and NGOs/CSOs.

Commitment and leadership (including governance and politics)

56. Strong commitment and leadership was shown by the relevant government institutions. At MINAGRI, the Minister and Permanent Secretary demonstrated continuous guidance and support. Daily management of the operation was the responsibility of the MINAGRI DG Planning and Programs Coordination. At RAB and NAEB, the CEOs were strongly committed to the operation. MINECOFIN and PMO were proactively managing disbursement- and verification-related issues. The clear division of responsibilities between the various government organizations contributed to clear accountability. There was no political interference observed neither within public agriculture institutions nor from government institutions outside the sector. The PforR had clear priority and support by the GoR, since various characteristics of the instrument were highly appreciated. Further, it should be pointed out that actual PSTA 3 expenditures amounted to USD 1.22 billion. Therefore, actual expenditures were slightly above the USD 1.2 billion planned in the ASIP.

Human resources and organizational capacity

57. There has been several organizational reviews of agriculture sector institutions (particular on MINAGRI, RAB, and NAEB) before and during PforR implementation.³⁸ The necessity of reforming the organizational structure of RAB and NAEB was raised during preparation. Accordingly, five relevant PAP action had been defined.³⁹ While progress has been made by completing these PAP actions, challenges remained, specifically related to RAB. RAB rapidly transitioned from a minor player during PSTA 2 to a main actor in PSTA 3.⁴⁰ Since RAB repeatedly received adverse audit opinions and since it faced difficulties in providing service delivery at decentralized level, this rapid transition exceeded its organizational capacity. However, this challenge was recognized and as part of AF additional PAP actions have been identified and completed.⁴¹ Also, the organizational and human capacity of

³⁷ See for example PAD p. 53f, Technical Assessment Annex 5, and PSTA 3 Chapter V. The latter document specifies role and responsibilities per sub-program.

³⁸ See Aide Memoire of sixth ISM, p.9.

³⁹ The five PAP actions include actions 1, 3, 4, 5 and 12.

⁴⁰ RAB took on the lead for numerous PSTA 3 programs and sub-programs, in particular for PSTA 3 programs 1 and 2. Further, it was responsible for approximately 60 percent of PSTA 3 expenditures (see Public Expenditure Review, 2017).

⁴¹ The Aide Memoires of the Implementation Support Missions 2, 3, 4 and 6 highlight challenges of RAB and NAEB with adverse audits. While NAEB made progress, challenges at RAB remained and the institution received a second adverse audit opinion (see Aide Memoire ISM 6). The challenge RAB is facing regarding decentralized service delivery has been highlighted by various documents and key informant interviews, including Risner, 2017.

MINAGRI to coordinate and manage the operation was stretched. This is particularly true for the Department on Planning and Programs Coordination.⁴² Further, Risner (2017) pointed out that MINAGRI's structure and capacity does not match well with its mandate in sector leadership and coordination, policy development, capacity building, resource mobilisation, regulation and monitoring and evaluation.⁴³ It should be acknowledged that the Ministry successfully acquired external TA to fulfill a number of its responsibilities. An example is the DfID-funded Agriculture Technical Assistance Facility (AgriTAF) which had been established at MINAGRI. AgriTAF supported the design and implementation of the MIS, policy development, climate change, and gender.

Factors subject to the control of the World Bank

Adequacy of implementation support

58. The World Bank provided adequate implementation support. The task team carried out eight ISMs⁴⁴. During each ISM, there was systematic reporting on the status of the DLIs, KPIs and PAP actions. Agreed actions were followed-up on consistently. A particular strength of the World Bank team was the proactive identification of opportunities and appropriate adaptation to changing conditions. The most visible step in this regard was the AF and restructuring. One specific example includes grasping the opportunity to initiate urgently needed policy reforms by supporting the development and approval of the NAP. The preparation of the NAP was further incentivized by including a respective DLI as part of restructuring. At this point, the opportunity was also taken to expand and strengthen the PAP by adding seven actions, particularly with respect to fiduciary aspects.

59. Further, the choice of the PforR instrument was acknowledged by the government as a signal of trust and confidence in country systems. This mutual trust was further strengthened during implementation and facilitated the agreement by the government to carry out the Agriculture Public Expenditure Review (PER).

60. Also the MDTF provided essential implementation support to MINAGRI and thereby to the transformational agenda of the PforR. It financed various pieces of analytical work and TA. Examples include the PER, the development of the National Agricultural Policy, and the Review of the PforR.

61. The Bank team also reacted to the fact that intermediate outcomes of results area 3 (private sector value chain development) and PDO 2 was lagging a little bit behind in comparison to results areas 1 and 2 (and PDO 1). As a response to this challenge, the task team involved the Enabling Business for Agriculture (EBA) Program⁴⁵ and the Bank prepared both the "Deep Dive: Agribusiness" Report and the "Agricultural Finance Diagnostic" in 2018. The Bank team also acknowledged challenge with respect to M&E. Here the task team engaged an external expert from March 2017 onwards. While it was too late to make significant changes to the overall M&E system (see Section IV.A below), some adequate revisions to the data collection methodologies for PDO 1 and three KPIs were made.

Adequacy of reporting

62. In general, the Aide Memoires and disclosed ISRs are candid and of good quality. The status of PDO indicators, DLIs and other KPIs are reported on systematically and accurately. The challenges regarding PAP implementation are flagged. The reporting on the status of PDO indicators 1 and 2 lacks

⁴² This challenge has been raised by a number of key informant interviews.

⁴³ Isner (2017) also pointed out that there has been considerable change and downsizing of staff in MINAGRI in the context of public service wide reforms that have aimed to reduce the service delivery role of central Ministries. In parallel with this trimming, there should have been a redefinition of staffing needs, and some recruitment, to capacitate MINAGRI for its new role. The Aide Memoire of ISM 2 highlighted that MINAGRI faced challenges to provide continuous technical support to decentralized field staff.

⁴⁴ The last two ISMs were combined with appraisal and implementation missions of PforR 2.

⁴⁵ See Aide Memoire ISM 5 (March 2017).

at times consistency.⁴⁶ The ISR rating of the progress towards achievement of the PDO is “satisfactory” with one exception.⁴⁷ In order to be coherent and acknowledge the continuous challenges with respect to PAP implementation and fiduciary-related issues (with respect to NAEB and in particular to RAB), the ratings on Overall Implementation Progress (IP) and Overall Risk could have been probably more critical.⁴⁸

Factors outside the control of government and/or implementing entities

63. Two factors, which affected outcomes and PDOs/KPIs of the program negatively, have been outside the control of government and the implementing entities. The first factor – directly affecting PDO indicator 2 – is the fluctuation of the world market price for exports/coffee. Rwanda experienced a 20 percent drop in the price of coffee from 2014-15 to 2015-16. The second factor is the drought which hit Rwanda particularly severely in 2016. According to the Seasonal Agricultural Survey (SAS) carried out by the National Institute for Statistics Rwanda (NISR) food production fell by almost nine percent and according to NAEB also coffee and tea production were significantly reduced. As a consequence, overall agriculture GDP growth fell from 8.9 percent in 2015 to 5.9 percent in 2016 (see World Bank, 2017a).

⁴⁶ With respect to PDO indicator 1, the methodology had been changed twice (see ISRs 6 and 8), which obviously had an impact on the actual levels. With respect to PDO indicator 2, the target value was reduced significantly in ISR 4 (from 25 percent to 5 percent), while it was put at the original target in ISR 8 again.

⁴⁷ ISR 6 rates the PDO progress as “moderately satisfactory”.

⁴⁸ In the ISRs, IP had been rated “satisfactory” and “moderately satisfactory” four times each. Overall Risk had been rated “moderate” and “low” four times each.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

IV.A. Quality of Monitoring and Evaluation

*M&E design*⁴⁹

64. The PAD provides all the required details regarding the Results Framework, including baseline, targets, data sources and data collection. In addition, each KPI is described in detail.⁵⁰ The operation's Theory of Change is clear concerning intermediate results areas 1 and 2. Concerning intermediate results areas 3 and 4, the operational logic and causal linkages to achieve the desired objectives is less clear. With respect to results area 3 (private sector driven development), the causal linkages between intermediate outcome indicators and PDO indicator 2 are obvious. However, reaching the intermediate outcome indicators (e.g. increased marketing of agricultural production or increased private sector investments) is complex and require additional critical complementary investments and interventions. Here the results chain is incomplete and/or interrupted.

65. With respect to results area 4 (institutional results-focused development and cross-cutting issues) for some KPIs it is clear how activities relate to outputs and intermediate outcome indicators (e.g. KPI 12 on MIS development). However, the linkages between intermediate outcome indicators and PDO indicators are either less obvious (e.g. the linkage between increased women empowerment (KPI 14) or food security (KPI 15) and the PDO indicators on adoption of modernized technologies and increased exports) or the linkages can be expected to materialize only if additional specific interventions are implemented (e.g. linkage between approval of agricultural policies (KPI 13) and the PDO indicators).

66. It is commendable that during appraisal, constraints of MINAGRI's MIS/M&E system were clearly identified and accounted for as a DLI. The M&E-related risks were also pointed out in the IRA and led to the formulation of DLI 6.

*M&E implementation*⁵¹

67. The indicators included in the Results Framework were measured and reported in the ISRs. However, challenges existed with the reporting and data collection/methodology regarding some indicators, particularly PDO 1 indicator and three KPIs.⁵² While already at an advanced stage of implementation, it is commendable that these challenges have been identified and addressed. As pointed out by the Imihigo Evaluation and AgriTAF, data collection, entry, analysis and reporting from the decentralized to the national level need to be further harmonized. While there are still areas for improvement, the design and implementation of the MIS (DLI 6) should be highlighted as a major achievement. The MIS ensures the sustainability of M&E functions beyond the operation and can serve the entire sector in the medium- to long-term.

⁴⁹ Many relevant aspects were already covered in other sections. PDO specification was discussed in Section II.A. "Relevance". SMARTness of indicators was captured in Section III.A "Key Factors during Preparation".

⁵⁰ As pointed out in Section II.A, details on the DLIs, including a clear verification protocol were also provided and the DLIs were clearly defined and measurable. The same section hints to some challenges regarding the alignment of the DLIs with the PDO. Section III.A highlights that some KPIs are not SMART which led to challenges concerning their quantification. Consequently, the methodologies for four KPIs were revised.

⁵¹ Section III.A, sub-sections "Results Framework" and "DLI Verification Protocol" already discussed baseline data, data collection and analyses methodologies and the effectiveness of the DLI Verification Protocol respectively. DLIs in the context of flow of funds were discussed in Section II.A., "Relevance of DLIs".

⁵² See Section III.A "Key Factors during Preparation" on the Results Framework for more details.

M&E utilization

68. M&E data were used to inform program management and to allow “corrective action”, in particular related to DLIs. The overachievement of DLIs 1-4 was recognized and the targets scaled-up as part of AF and restructuring accordingly. Concerning DLI 6 (MIS for Agriculture Sector) it was realized that the system’s usefulness would increase significantly, if rolled-out to all 30 districts. DLI 6 was extended accordingly during AF and restructuring. Limited progress on some private sector development related indicators was acknowledged and corrective action was taken in the form of additional analytical work to better understand and address development constraints. Difficulties with respect to DLI 7 (three agricultural policies) were recognized and to ensure consistency across these policies, the Ministry of Agriculture decided to formulate a new NAP first. M&E data and findings very much influenced the design of PforR 2 (and PSTA 4) concerning a stronger and more explicit focus on private sector development.

Justification of overall rating of M&E quality

69. **Modest** – There were some significant shortcomings in the M&E system’s design and implementation. With respect to the first PDO objective, PDO indicator 1 can only serve as a proxy and the measurement methodology (also for other KPIs) had to be revised. However, other indicators such as yield increases (DLI 3) and reduction in soil erosion (DLI 4) provided additional benchmarks for improved productivity. PDO indicator 2 was subject to exogenous factors. Some indicators were not SMART. Further, the results chain logic on how to achieve the second PDO faced constraints. There are some moderate shortcomings regarding the Theory of Change. Setting-up the sector-wide MIS is a major achievement.

IV.B. Environmental, Social, and Fiduciary Compliance

Environmental and Social

70. The World Bank prepared a comprehensive ESSA from which one PAP action – preparation of ESIM (incl. training) – was derived. While the training was delayed, the PAP action was completed eventually. During implementation, it was recognized that the ESIM’s, which builds on the government’s Environmental and Social Management System (ESMS), small dam safety guidelines would need to be updated. At restructuring, the PAP was amended accordingly (PAP action 4.16) and the action was completed. While reporting during implementation as part of the Aide Memoires and ISRs has been sparse, it appears that core environmental and social principles have been adhered to.

Fiduciary

71. Overall, procurement and financial management arrangements were compliant with the World Bank Policy/Directive for Program-for-Results Financing. In total, the PAP included 14 fiduciary-related actions, which were all completed by the closure of the operation. However, the task team pointed out that the Grievance Redress Mechanism (PAP action 4.8) and the communication strategy to promote this mechanism (PAP action 4.7) still need further fine-tuning. The call center for the GRM is operational and staffed. Nevertheless, some issues regarding the Call Management Software still need to be resolved. The communication strategy was developed but remains to be formally validated by program closure. Further, there were qualified audit opinions concerning RAB, NAEB, and the districts. While the latter were resolved, the issues concerning RAB still needs further actions. PforR 2 has acknowledged these challenges and is addressing them proactively. The successor program included a continuing reform of RAB and progress on the implementation plan for the RAB restructuring order is a PDO indicator plus DLI. The DLI also includes unqualified audit opinions on financial statements of RAB.

IV.C. Bank Performance

Quality at entry

72. Although not yet released at that time, preparation and appraisal of the operation were in line with the World Bank Policy and Directive Program-for-Results Financing (2015c). The PforR has been of high strategic relevance.⁵³ To ensure that the identified PAP actions are implemented timely, requires substantial financial and human resources plus incentives – a fact that might have been somewhat underestimated at design stage. However, through the MDTF and the close collaboration with the other DPs resource allocation for capacity development had been at least partly secured at entry stage.

73. Many aspects of the Technical Assessment (and the ESSA and FSA) were also of high quality, including the economic and financial analyses. However, a more in-depth analysis of constraints, opportunities, and concrete activities/investments to spur private sector development could have been useful.⁵⁴ Also, given the nascent stage of private sector development, less ambitious goals should have been formulated.

74. Implementation arrangements clearly define roles and responsibilities of the implementing entities MINAGRI, RAB, NAEB, SPIUs and the districts. The capacity of RAB and the districts to handle the significant increase of responsibilities in comparison to PSTA 2 might have been overestimated.⁵⁵ Key policies affecting agricultural development have been considered explicitly by including the preparation and approval of three sectoral policies as a DLI (DLI 7). Also, the crucial importance of an improved MIS/M&E system had been acknowledged and factored in as a DLI (DLI 6). Shortcomings concerning the M&E arrangements relate to insufficient specification of data collection/data analyses methodologies and the reporting on progress from decentral to central levels.⁵⁶ Positive features and challenges of the DLI Verification System have been discussed in Section II.A.

75. The PAD and other preparation/appraisal documents correctly point to the strong linkages between agricultural growth and poverty reduction in Rwanda.⁵⁷ The operation supported the strategic objectives of PSTA 3, which explicitly includes poverty reduction and inclusive economic growth.⁵⁸ These objectives were supposed to be achieved *inter alia* by six core drivers identified as part of PSTA 3/PforR preparation.⁵⁹ Each driver was directly addressed by the PforR intermediate results areas 1-4 and their respective intermediate outcome indicators. The Economic Assessment of the PAD confirmed the positive effects of productivity increases and investments in irrigation schemes on poverty reduction. Since food insecurity follows a similar distribution across districts as poverty⁶⁰, KPI 15 on food security can also be considered as a proxy for poverty reduction.

*Quality of implementation support*⁶¹

⁵³ See Section I.A.

⁵⁴ See Section III.A on risk identification and measures.

⁵⁵ See Section III.A on selection of stakeholders and Section III.B on coordination and engagement and on human resources and organizational capacity.

⁵⁶ For details on M&E arrangements see Section IV.A on M&E design.

⁵⁷ See for example PAD, p. 1-2.

⁵⁸ The Bank Guidance on ICR for PforR Operations notes that Gender can be discussed as part of this section. For details on how Gender was addressed during preparation and implementation see Section II.D.

⁵⁹ The six drivers include: land husbandry, technology and research, agricultural finance, private sector value chain development, market-oriented infrastructure, and institutional development.

⁶⁰ See PAD, p.4.

⁶¹ On fiduciary and environmental and social aspects see Section IV.B.

76. Overall, implementation support has been proactive and responsive to emerging opportunities and needs. The task team acted very flexibly and pointed out that – since this has been the first agriculture PforR globally – a learning-by-doing approach was applied during the implementation. The government perceived the introduction of the PforR instrument as a signal of trust and confidence in country systems. The task team built on this trust, further strengthened it through an open and constructive dialogue and was therefore able to initiate essential reforms required for agriculture development in Rwanda.⁶² As confirmed by key informant interviews, also the DPs very much appreciated the leading role the World Bank Team played in recent years, which was facilitated by the PforR and the coordination of the ASWG. This strong partnership helped to find and communicate common DP positions concerning agricultural development. Further, it enabled critical support for capacity development, for example through the MDTF and AgriTAF. Another sign for how proactively the task team supervised the operation is the initiated engagement with Transparency International Rwanda (TIR) to further enhance citizen engagement in the program and the agriculture sector in general.⁶³

77. As evidenced by the Aide Memoires and ISRs, implementation support was characterized by systematic analysis and follow-ups of the status of DLIs, PAP actions, and KPIs.⁶⁴ The responsiveness of implementation support is also revealed by restructuring and AF. At this occasion, important changes were introduced to keep up incentives for progressing with implementation.⁶⁵ The lack of a robust PSTA 3 Mid-Term Review constituted a missed opportunity to inform and introduce other useful changes at the time of restructuring.

78. Eventually, the task team reacted to the fact that the progress of achieving private sector-related outcome and PDO indicators was lagging a little bit behind the productivity-related indicators. Also, challenges concerning the M&E system were realized. However, the opportunity at AF and restructuring to steer the program towards PDO 2 could have been used probably even more decisively.

79. The Bank team managed challenges related to the verification system appropriately by emphasizing the close linkage between the independent Imihigo Evaluation by IPAR with the actual DLI verification. As indicated in Section III.A, the successor program PforR 2 acknowledged these challenges and introduced modifications to the verification system, such as OAG as the verifying entity and the provision of additional evidence supporting the reported status of the DLIs.

80. Early on during implementation support, the task team initiated discussions with the government concerning a follow-on operation. Plans for PforR 2 were first discussed during the third ISM in March 2016. The design of PforR 2 was very much informed by lessons learned during this operation. Many of the recommendations coming out of the Review (UNIQUE, 2017), such as stronger focus on private sector development and changes to the DLI Verification Process, have been adopted.

⁶² Examples include the preparation and approval of the NAP (including three sectoral policies), the preparation of the PER (including specific actions as a follow-up), and the design and implementation of a sector-wide MIS.

⁶³ As of November 2016, the World Bank team started working with Transparency International Rwanda (TIR) to further strengthen community engagement in agriculture sector planning. The aim was to increase farmers' ownership of agricultural development projects through their effective participation in the planning, monitoring and evaluation of the district performance contracts "*imihigo*"; deepen cooperation between CSOs and government officials at district level; and integrate the lessons learned from pilot districts (Nyanza and Kayonza) into the agricultural sector policy design at the district and national levels (see Program Paper on AF and Restructuring, p.23).

⁶⁴ As mentioned in Section III.B, the Aide Memoires and ISRs are generally candid and of good quality. However, the ISR rating regarding the progress towards achievement of IP and Overall Risk could have been more critical.

⁶⁵ For details see Sections I.B. and III.B.

Justification of overall rating of Bank performance.

81. The overall rating of Bank performance is “**moderately satisfactory**”. The step from IPFs to the first agriculture PforR globally was innovative and should be acknowledged. However, quality at entry reveals some shortcomings, in particular related to defining specific pathways for private sector development. Implementation support was adequate, in particular given the responsiveness and flexibility applied.

IV.D Risk to Development Outcome

82. The operation managed to introduce various initiatives and reforms that are likely to sustain development outcomes and overall agricultural development. The approved NAP (including the three sectoral policies) provides a sound and solid framework for agricultural growth, poverty reduction and food security. The NAP also provides a clearer framework for engaging the private sector. Further, the PforR-instrument managed to build capacity and further strengthen country systems. This achievement was made possible through the comprehensive list of completed PAP actions plus additional capacity development measures supported through the MDTF and AgriTAF. If used for “evidence-based learning”, the new sector-wide MIS allows for identifying emerging risks and challenges quickly and could be used for the identification corrective actions. Also, the strong buy-in of the PforR into the government program PSTA 3 – and the strong coherence between the follow-on operation PforR 2 and PSTA 4 – ensures long-term political commitment and support.

83. However, some specific risks remain which might affect development outcomes:

- *Impacts of climate change:* The severe impacts of extreme weather events, in particular droughts, can have on productivity and food security became apparent during implementation.⁶⁶ The likelihood that this risk will materialize in the future is high according to the Fourth IPCC Assessment Report.⁶⁷ PforR 2/PSTA 4 are addressing this challenge proactively and specifically. For example, for each DLI the climate change intent is specified and climate change is coherently mainstreamed into PSTA 4. While impacts cannot be avoided completely, the government is more likely to be able to reduce them.
- *Investments in agricultural research:* As pointed out by the Review of the Rwanda Agriculture PforR and the Agriculture PER, there has been a severe underinvestment in agricultural research.⁶⁸ The envisioned transformation to a knowledge-intensive and market-oriented sector with sustainable productivity increases can only be achieved with more significant expenditures in agricultural research. These investments are particularly important if technological advances are supposed to be realized to stay competitive in the world market (for export commodities), to successfully cope with the high population density and the impacts of climate change.
- *Capacity of RAB:* Section III.B. Key Factors during Implementation (sub-section on “Factors subject to control of the government and/or implementing entities”) discussed the transition

⁶⁶ See Section III.B on factors outside the control of the government and/or implementing entities.

⁶⁷ See Forth IPCC Assessment Report and PAD PforR 2 p.15.

⁶⁸ According to the Agriculture PER, only 7.2 percent of the total PSTA 3 budget of USD 1.2 billion were allocated to Program 2 “research, technology transfer, and professionalization of farmers”. Actual expenditures accounted for only 0.7 percent (it should be noted that the PER covers only the first three years of the five-year lifespan of PSTA 3. According to the Agriculture Science and Technology Indicators (ASTI) led by IFPRI, Rwanda spent USD 39.6 million (in 2011 PPP Dollars) in 2014 accounting for 0.67 percent of the agriculture GDP. Neighboring countries such as Uganda and Kenya spent USD 152.5 and USD 274.1 million accounting for 0.97 percent and 0.79 percent of agricultural GDP respectively.

of RAB from a minor player during PSTA 2 to a main actor in PSTA 3. Challenges became apparent with regard to repeated adverse audit opinions and service delivery at decentralized level. PforR 2 is addressing this risk proactively and elevated further restructuring of RAB to the PDO level. Further incentives for transforming RAB to an efficient and effective public service provider are provided by one DLI and the PAP.

- *Fluctuation of export prices*: Fluctuation of export prices are likely to continue to pose a risk for agriculture and private sector development in Rwanda, given the dependency on export crops, such as coffee, tea, and pyrethrum. Fluctuating and decreasing prices can affect the attractiveness of expanding value chain development and private sector investments. These prices changes would not only affect agribusiness, but also trickle down to cooperatives and smallholder farmers given their integration into these value chains. In this context it should be pointed out that the NAP highlights market price stabilization and other tools as key approaches for risk mitigation.
- *O&M of infrastructure investments*: Aide Memoires and other Program documents repeatedly raise the concern of sufficient financial and human resource allocation to O&M to ensure sustainability of infrastructure investments, particular irrigation systems. If not adequately addressed, agricultural productivity growth will not be sustainable. The issue has been partly addressed during implementation, but Program documents reveal that the issue has not been solved completely. This risk has been addressed by PforR-2 to some degree by including maintenance in the PPP contracts for construction of terraces and irrigation systems.

V. LESSONS AND RECOMMENDATIONS

A PforR can trigger urgently needed policy reforms and other sensitive actions.

89. The choice of the PforR instrument was perceived by the government as a signal of trust and confidence in country systems. Strong country and government systems, such as fiduciary systems, governance and anti-corruption systems, social and environmental systems and technical capacities are a prerequisite for a successful PforR. The Bank team (plus the other DPs) has been able to further strengthen this mutual trust through a transparent and constructive working mode during implementation. These developments were the prerequisite for the Bank team being able to grasp the opportunity of initiating wider policy reforms (based on the preparation and approval of the NAP) and to conduct more sensitive analytical work, such as the Agriculture PER. These achievements also require a Bank and government team which are flexible and responsive to emerging opportunities. As mentioned above, this has been the first PforR in the agriculture sector. The satisfactory outcomes demonstrate the suitability of this instrument for the sector.

A phased PforR approach and a stronger focus of the operation might be appropriate.

84. The step from IPFs to a “fully fledged” agriculture PforR was very innovative but also ambitious. Future operations could reduce complexity and narrow the scope. The next phase should concentrate on ensuring that the key processes of the PforR instrument are strengthened based on systematic TA/capacity development. These key processes are the M&E system and DLI verification process (see other lessons below). Further, complexity can be reduced by narrowing the scope of support provided to PSTA 4 concerning thematic areas, geographical scope and targeted beneficiaries. Concerning the thematic area, all stakeholders agree on the importance of the private sector for overall agriculture development. The recognition that government’s role should be more that of a market enabler is reflected in the design of PforR 2.

85. A phased PforR approach could acknowledge increased capacities and expand coverage gradually over time. Once a more narrowly defined PforR approach combined with intensive TA

support show promising results with respect to institutional capacities and sustainable impacts on the ground, the scope of the operation could be expanded. In particular, DLIs and PAP actions are appropriate means to steer this gradual development of the PforR instrument over time.

Specifying PforR results chains and ensuring their implementation might be more complex than for IPFs, but is of outmost importance to reach envisaged PDOs.

86. As part of large and complex government programs it is difficult to (i) track PforR expenditures; and (ii) assign specific outcomes to program interventions or specific expenditures. These factors make the specification of results chains and ensuring their implementation challenging. The stronger focus mentioned in the first lesson above would certainly help to make the definition of PforR results chains and their operational logic easier and more precise. Nevertheless, also in cases of very broad horizontal support of a government program, the PforR needs to be very specific about the Theory of Change, i.e. how activities lead to outputs, intermediate outcomes and the PDO (and what the assumptions of the causal linkages are). Careful thoughts need to be given about the PDO definition itself and what the incentives for reaching the PDO indicators are. Otherwise, the PforR faces the risk of “getting lost” in the government program without any means to steer its direction towards its PDO.

87. Overall the PDO, including the incentives to reach it, have to be at the forefront of PforR design. Future PforRs should explicitly harmonize the incentives provided by this financing-instrument, the broad set of objectives of government programs, and the operation’s PDO.

Focus on DLIs needs to be balanced with other PforR-specific goals.

88. The focus on DLIs was evidenced by their (over) achievement. It is also apparent when looking at government and the Bank team reporting and it was confirmed during key informant interviews. This focus is impressive and wanted by the PforR instrument. However, it needs to be balanced with other instrument-specific goals, such as capacity building and institutional strengthening, enhanced partnerships and effectiveness. It is obvious that a more balanced perspective would need to be incentivized. There are probably two ways of providing these incentives: (i) through the definition of the DLIs themselves; and (ii) strengthening direct incentives for achieving the non-DLI related objectives. The former is for example possible by defining DLIs that are at the same time PDO indicators and/or PAP actions. The latter way might be more difficult to follow successfully but can relate to emphasizing (and enforcing) the fact that the completion of the PAP actions are a legal obligation as per the Financing Agreement. A prerequisite of achieving the non-DLI related objectives (including Technical Assistance) is also the provision of adequate resources, for example through Trust Funds and/or financing through other DPs.

DLI verification should be based on a well-defined and transparent process.

90. DLI verification is one of the single most important processes of a PforR operation – also with respect to the credibility of the instrument. A robust verification should be viewed as an opportunity for increased accountability and transparency by the government. In order to allow for a sound verification, the process could:

- (i) involve a verifying entity which has the mandate, capacity and experience to conduct verification of development programs.
- (ii) be very transparent by detailing the methodology, which should include additional evidence to support the reported status of the DLIs.
- (iii) allocate adequate staff time and financial resources. The verification should be scheduled on fixed dates and in advance to allow for sound planning and implementation.

A well-functioning and credible M&E system is of utmost importance for the PforR operation.

91. As part of PforR operations, the importance of sound M&E systems is even more evident than for regular IPFs. This is particular true due to the focus of the former on results and the implications for disbursement. M&E systems of PforR operations are most likely even more complex than those of regular IPFs, since the former is an integral part of an even larger government program. Further, M&E challenges are probably more significant in agriculture than in other sectors. Given these complexities and the above-mentioned importance, the Bank needs to pay even more attention to a well-functioning and credible M&E system in the case of agriculture PforR.

92. Capacity development, and allocation of human and financial resources need to be increased to reflect the importance of the M&E system. Continuous TA support should be considered. The current MIS was an important step into the right direction, but further improvements are required, e.g. total coverage of the Results Framework of the government program. Having a MIS/M&E-related DLI is commendable (as in the PforR) and should be continued with as part of PforR 2. However, the expected quality standards should be clarified much more clearly. The disbursement should follow the achievements of various well-defined milestones. Further, to avoid delays in reporting, changing methodologies or even cancelation of indicators, the design has to make sure that the formulated indicators are truly SMART. The check for “SMARTness” should involve more than just “ticking boxes” but should be a central exercise when designing PforRs.

The PforR Instrument can facilitate donor coordination towards full alignment with government programs. Technical Assistance is required to strengthen government capacity.

93. As demonstrated by this operation, the PforR instrument provides an opportunity to coordinate development partners, harmonize the dialogue with the government and facilitate full donor support towards a government program. Also facilitated by the ASWG, the direction of support for the agriculture sector became more oriented towards common objectives. The strong role of the ASWG, which also includes farmer representatives, CSOs, NGOs and other government institutions, ensured inclusiveness of PforR implementation. The MDTF was essential to build MINAGRI’s capacity to function as an enabler of the transformational change in the agricultural sector. The MDTF provided support for example for conducting the PER and the preparation of the NAP. These pieces turned out to be critical for setting framework conditions for sustainable agricultural development. Even if only one donor joined the MDTF, other programs experienced a stronger direction towards PSTA 3 and capacity gaps identified through the PforR were addressed by the provision of resources by other development partners. Having TA support as a complementary mean to support capacity development is essential to the PforR’s objective of strengthening government systems. Other development partners acknowledged the advantages of the PforR instrument and joined the MDTF for the second PforR. The government very much appreciated this signal of trust and collaboration with partners became even more constructive.

ICR ANNEXES

Annex 1. Results Framework and Disbursement Linked Indicators

ANNEX 1A. RESULTS FRAMEWORK

PDO Indicators by Objectives / Outcomes

increase and intensify the productivity of the Rwandan agricultural and livestock sectors				
► Increased agricultural land under modernized agricultural technologies (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	19.00	31.00	31.00	34.00
Date	30-Jun-2013	04-Sep-2017	04-Sep-2017	28-Sep-2018
Comments				

to expand the development of value chains.				
► Increased agriculture exports (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	22.00	23.00	44.70	25.00
Date	30-Jun-2013	26-Oct-2016	24-Sep-2018	28-Sep-2018
Comments				

Intermediate Results Indicators by Results Areas

Agriculture and animal resource intensification: (i) Soil erosion reduced and land sustainably managed; (ii) Land productivity for priority crops increased; (iii) Animal productivity increased and ani				
► Increased total milk production (Metric ton, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	503,000.00	816,791.00	816,791.00	780,000.00
Date	30-Jun-2013	04-Sep-2017	04-Sep-2017	28-Sep-2018
Comments				

Research, technology transfer and organization of farmers: (i) Improved technologies which are responsive to Rwanda's agro-ecological potential, men and women farmer needs and resources, and market				
► Increased % of cooperatives/farmers' organizations which are graded A and B (includes gender dimension) (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Comments				

Value	5.00	18.00	58.00	35.00
Date	30-Jun-2013	30-Sep-2016	24-Sep-2018	28-Sep-2018
Comments	PPT supplied by MINAGRI notes 58% (Graded A) 42% (Graded B)			

Private sector-driven value chain development and expanded investments: (i) Enhanced business environment for expanded agricultural investments and value addition; and (ii) Competitive and private sec

► Increased value (total production and exports) of major competitive value chains (Amount(USD), Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	132,000,000.00	356,500,000.00	515,990,000.00	309,000,000.00
Date	30-Jun-2013	04-Sep-2017	24-Sep-2018	28-Sep-2018
Comments	VP: 3.05 million USD VE: 515.99 million USD VP: data from NISR 2018, BNR VE: data from NAEB June 2018 report			

► Increased agri-finance lending for: (a) farmers (including gender targets); & (b) Ag. enterprise investments (value chain activities) (Amount(USD), Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	3,600,000.00	6,793,000.00	6,793,000.00	7,600,000.00
Date	30-Jun-2013	26-Oct-2016	26-Oct-2016	31-Mar-2017
Comments				

▲ Increased agri-finance lending for: (a) farmers (including gender targets); & (b) Ag. enterprise investments (value chain activities) (Percentage, Custom Supplement)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	65.00	66.50	66.50	75.00

► Increased private sector investments in ag. sector (domestic and foreign) (Amount(USD), Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	513.00	621.60	774.50	730.00
Date	30-Jun-2013	30-Sep-2015	27-Sep-2018	31-Mar-2017
Comments				

► Increased % of agric. production marketed (Percentage, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	28.00	22.00	23.00	25.00
Date	31-Dec-2012	26-Oct-2016	26-Oct-2016	28-Sep-2018
Comments				

Institutional results-focused development and strategic cross-cutting issues: (i) Enhanced capacity of sector and its institutions to deliver efficient and effective agricultural services; (ii) Streng				
▶ Enhanced results-focused institutional capacity development of MINAGRI & Districts: Action Plan (AP) updated/ prepared; AP implementation initiated & AP fully operational (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Minagri Plan not available	MINAGRI draft strategy completed; approval pending	MINAGRI & District Action Plans Fully Operational	Minagri Action Plan Fully Operational
Date	30-Jun-2013	30-Sep-2016	24-Sep-2018	28-Sep-2018
Comments				
▲ Enhanced results-focused institutional capacity development of MINAGRI & Districts: Action Plan (AP) updated/ prepared; AP implementation initiated & AP fully operational (Text, Custom Supplement)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	Districts Plans Not available	Districts Strategies completed; pending formal approval	Districts Strategies completed; pending formal approval	District Action Plans Fully operational
▶ Increase in Women's Empowerment in Agriculture Index for Rwanda (Index (%)) (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	91.00	91.00	91.00	93.00
Date	30-Jun-2013	30-Sep-2016	30-Sep-2016	28-Sep-2018
Comments As of September 24, 2018, data not available from MINAGRI. MINAGRI notes "To be done in 2018/19 FY with the support of IFAD & DFID"				
▶ Increased % of households with acceptable levels of food consumption (Food consumption score (%)) (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	20.00	23.00	23.00	23.00
Date	30-Jun-2013	04-Sep-2017	04-Sep-2017	28-Sep-2018
Comments				

ANNEX 1B. DISBURSEMENT LINKED INDICATORS							
DLI 1: Soil Erosion Protection. Extent to which land is protected against soil erosion according to agreed technical standards (P: Progressive; R: Radical; T: Total).							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	P 802,292 ha R 46,246 ha T 848,538 ha	0	P 835,941 ha R 54,044 ha T 889,985 ha	P 869,590 ha R 61,842 ha T 931,432 ha	P 903,240 ha R 69,640 ha T 972,880 ha	P 919,561 ha R 103,918 ha T 1,023,479 ha	
Actual values		0	P 846,476 ha R 64,590 ha	P 894,268 ha R 82,566 ha	P 913,212 ha R 103,918 ha	P 923604	
Allocated amount (\$)*		0	IDA \$9.0	IDA \$5.0	IDA \$6.0	IDA \$ 9.20 MDTF \$3.54	IDA \$29.20 MDTF \$11.97
Disbursed amount (\$)***		0	IDA \$4.78 MDTF \$5.06	IDA \$5.35 MDTF \$0.76	IDA \$8.65 MDTF \$2.58	IDA \$9.37 MDTF \$3.57	IDA \$28.15 MDTF \$11.97
Comments (achievements against targets):							
DLI 2: Extent to which land on hillsides and marshlands is irrigated according to agreed technical standards.							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	H 3,075 ha M 24,721 ha T 27,796 ha	0	H 4,075 ha M 26,521 ha T 30,596 ha	H 5,075 ha M 28,321 ha T 33,396 ha	H 6,075 ha M 30,121 ha T 36,196 ha	H 8,500 ha M 36,000 ha T 44,500 ha	
Actual values		0	H 4,807 ha M 27,005 ha T 31,812 ha	H 6,130 ha M29,277 ha T 35,407 ha	H 8,392 ha M 35,161 ha T 43,553 ha	H 11,978 ha M 36,521 ha T 48,499 ha	

Allocated amount (\$)		0	IDA \$4.0	IDA \$2.5	IDA \$3.5	IDA \$4.60 MDTF \$1.40	IDA \$14.60 MDTF \$5.99
Disbursed amount (\$)		0	IDA \$3.75 MDTF \$1.26	IDA \$4.27 MDTF \$1.64	IDA \$1.21 MDTF \$1.68	IDA \$4.7 MDTF: \$1.41	IDA \$13.93 MDTF \$5.99
Comments (achievements against targets):							
DLI 3: Extent to which the average crop yield for cassava and coffee, and the average daily yields of milk per cow improves. (a) Cassava (CA) [MT/ha]; (b) Coffee (CF) [kgs of cherry/tree/yr]; (c) Milk per Cow (CO) [ltrs/day]							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	15 MT/ha 2.2 kgs 4.0 ltrs/day	0	16 MT/ha 2.3 kgs 4.5 ltrs/day	17 MT/ha 2.5 kgs 5.0 ltrs/day	18 MT/ha 2.7 kgs 5.5 ltrs/day	CA:19 CF: 2.9 CO 6.2	
Actual values		0	16.3 MT/ha 2.4 kgs 5.1 ltrs/day	17.8 MT/ha 2.6 kgs 5.7 ltrs/day	18.97 MT/ha 2.8 kgs 5.7 ltrs/day	CA:19.00 CF: 2.84 CO: 6.30	
Allocated amount (\$)		0	IDA \$4.0	IDA \$5.0	IDA \$6.0	IDA \$6.90 MDTF \$2.32	IDA \$21.90 MDTF \$8.97
Disbursed amount (\$)		0	IDA \$1.19 MDTF \$1.89	IDA \$7.75 MDTF \$2.47	IDA \$4.94 MDTF \$2.28	IDA \$7.04 MDTF \$2.33	IDA \$20.92 MDTF \$8.97
Comments (achievements against targets):							
DLI 4: Extent to which the number of enhanced agricultural innovation technologies are developed and released to farmers, and the number of farmers adopting enhanced agricultural innovation technologies increases.							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	5 (25%)	0	3 (25%)	3 (40%)	4 (50%)	6 (70%)	

Actual values		0	5 (27%)	4 (45%)	5 (61.8%)	6 (61.8%)	
Allocated amount (\$)			IDA \$4.0	IDA \$5.0	IDA \$6.0	IDA \$6.90 MDTF \$1.84	IDA \$21.90 MDTF \$8.97
Disbursed amount (\$)			IDA \$3.58 MDTF \$1.89	IDA \$5.09 MDTF \$2.47	IDA \$5.29 MDTF \$2.51	IDA \$7.11 MDTF \$2.10	IDA \$21.08 MDTF \$8.97
Comments (achievements against targets):							
DLI 5: Extent to which the lending for agricultural sector increases for: (a) farmers (F) (including gender targets) and (b) Ag enterprise (A) investments (value chain activities) (% of total).							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	3.6	0	4.8	5.9	7.0		
Actual values		0	6.1%	6.6%	6.60%		
Allocated amount (\$)		0	IDA \$2.5	IDA \$3.75	IDA \$3.75		IDA \$10 MDTF \$5.06
Disbursed amount (\$)		0	IDA \$2.39 MDTF \$1.26	IDA \$6.40 MDTF \$1.64	IDA \$0 MDTF \$1.68		IDA \$9.32 MDTF \$4.58
Comments (achievements against targets):							
DLI 6: Extent to which the updated gender sensitive management information system for the agricultural sector that was developed and implemented is functional in respective Districts. - (FR) and Action Plan (AP) for the agriculture sector: Completed (C), Approved (A), Implementation initiated (II) and Fully Operational (FO).							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	Draft M&E FR & partial MIS in MINAGRI	0	Draft M&E FR	FR/AP (C, A, II)	FR/AP FO	MIS rolled out into 30 districts and producing regular reports. by end June 2017	

Actual values		0	FR (C)	AP (C, A)	AP (O)	MIS rolled out to 30 districts and producing regular reports by end June 2017	
Allocated amount (\$)			IDA \$2.0	IDA \$4.0	IDA \$4.0	IDA \$4.60 MDTF \$1.38	IDA \$14.60 MDTF \$5.99
Disbursed amount (\$)			IDA \$1.91 MDTF \$1.26	IDA \$3.69 MDTF \$1.64	IDA \$3.68 MDTF \$1.68	IDA \$4.70 MDTF \$1.41	IDA \$13.99 MDTF \$5.99
Comments (achievements against targets):							
DLI 7: Extent to which agricultural policy reforms are implemented. Seeds (S), Fertilizer (F) and Ag. Finance (AF) policy, action plan (AP) prepared and implemented (I).							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	S None exists F Initial draft exists AF None exists	0	F complete & approved P, AP, I	S complete & approved P, AP, I	AF complete & approved P, AP, I	(a) adjustments to S, F and AF strategies/ policies agreed to reflect updated NAP; (b) revised implementation plans developed and (c) policies/ strategies implemented.	

Actual values		0	F complete & approved P, AP, I	S complete & approved P, AP, I	Significant progress in key steps to develop new policy.	<p>(a) adjustments to S strategies/ policies agreed to reflect updated NAP; (b) revised implementation plans developed and (c) policies/ strategies implemented.</p> <p>(a) adjustments to F strategy/ policy agreed to reflect updated NAP; (b) revised implementation plan developed and (c) policy/ strategy implemented.</p> <p>(a) adjustments to AG strategy/ policy agreed to reflect updated NAP; (b) revised implementation plan developed and (c) policy/ strategy implemented.</p>	
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Allocated amount (\$)			IDA \$5.0	IDA \$7.0	IDA \$8.0	IDA \$9.20 MDTF \$3.26	IDA \$29.20 MDTF \$11.96
Disbursed amount (\$)			IDA \$9.56 MDTF \$2.53	IDA \$6.47 MDTF \$3.29	IDA \$0.0 MDTF \$3.04	IDA \$12.54 MDTF \$3.10	IDA \$28.57 MDTF \$11.96
Comments (achievements against targets):							
DLI 8: Extent to which an updated National Agricultural Policy has been approved. action plan (AP) prepared (P) and approved (A).							
	Baseline	Prior Results	2013/2014	2014/2015	2015/2016	2016/2017	Total
Original values	2004 NAP	0	N/A	N/A	N/A	Approval (by ASWG) of the Updated National Ag. Policy 2016 with supporting implementation plan).	
Actual values	N/A	0	N/A	N/A	N/A	Approval (by ASWG) of the Updated National Ag. Policy 2016 with supporting implementation plan).	
Allocated amount (\$)						IDA \$4.60 MDTF \$1.47	IDA \$4.60 MDTF \$1.47
Disbursed amount (\$)						IDA \$4.90 MDTF \$1.41	IDA \$4.90 \$1.41
Comments (achievements against targets):							

Annex 2. Bank Lending and Implementation Support

Task Team Members

Name	Responsibility/Area of Specialty
Mark Austin	TTL (until September 2015)
Tim Robertson	TTL (since October 2015)
Augustine Langyintuo	Senior Operations Officer (Inputs Markets)
Richard Anson	Lead Agriculture Economist, Consultant
Valens Mwumvaneza	Senior Rural Development Specialist
George Labi	Governance Global Practice Manager
Severin Kodderitzsch	Agriculture and Food Security Global Practice Manager
Belinda Mutesi	Team Assistant
Pauline McPherson	Senior Operations Officer
Mary Bitekerezo	Senior Social Development Specialist
Svetlana Khvostava	Environmental Specialist
Lillian Namutebi	Financial Management Specialist
Mulugeta Dinka	Procurement Specialist
Tugba Gurcanlar	Rural Finance and Trade Specialist
Meena Munshi	Integrated LLI Engagement Leader
Wim Douw	Senior Operations Officer (Value Chains)
Joesph Byamugisha	Financial Management Specialist
Dina Umali-Deiningir	Agriculture and Food Security Global Practice Manager
Elliot Wamboka Mghenyi	Senior Economist
Yasmin Tayyab	Senior Social Development Specialist
Bremala Malli	Senior Operations Officer
Aimee Mpambara	Agriculture Specialist
Eric Adda	Senior Financial Management Specialist
Francoise Kayigamba	Environmental and Social Safeguards Consultant
Alice Ntमितondero	Accounting and Public Financial Management (Consultant)
Esperance Makuragwiza	Agribusiness Consultant

Dimitrie Mukanyiligira	Team Assistant
Ajai Nair	Program Coordinator
Jamexis Christian	Operations Officer
Cedric Cubahiro	Senior Finance Assistant
Maria Iskandarani	Senior Consultant M&E
Emmanuel Muligirwa	Environmental Specialist
Winston Dawes	Senior Agricultural Specialist
Chris Jackson	Senior Agriculture Economist
Colin Risner	Consultant Capacity Development
Tharcisse Musabyimana	Social Development Consultant

Staff time and Cost

A. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY14	17.33	160,668.6
Total	17.33	160,668.6
Implementation Support/ICR		
FY15	38.1	250,085
FY16	39.94	331,433.2
FY17	87.12	122,1000
FY18	43.05	894,371.8
FY19	7.16	177,744.4
Total	215.37	2,874,634

Annex 3. Program Expenditure Summary

Source of Funds	Type of Co-Financing (1)	Appraisal Estimate (2)	Actual Expenditures (Disbursement)		
			Actual (4)	Percentage of Appraisal (5)	Percentage of Actual Total (6)
Borrower		300	368.4	122.80%	30.24%
World Bank (Loan)	IDA-55480	100	93.39	93.39%	7.67%
	IDA-59620	46	47.49	103.23%	3.90%
	IDA (LWH, RSSP, FRDP)	194	248.86	128.28%	20.43%
Other Partners:(Grants)	TF-19208	50.60	50.60	100%	4.15%
	TF-A6465	10	9.24	92.4%	0.76%
	EU	160	110.5	69.06%	9.07%
	USAID	138	127	92.03%	10.42%
	IFAD	120	50.7	42.25%	4.16%
	DFID	90	7.76	8.62% ⁶⁹	0.64%
	Netherlands	10	9.1	91.00%	0.75%
	Swiss	6	1.7	28.33%	0.14%
	Japan/JICA	32	20.9	65.31%	1.72%
	AfDB	20	70.7	353.50%	5.80%
	FAO	30	1.9	6.33%	0.16%
Total		1200	1218.24	101.52%	100%

⁶⁹ DfID contributed US\$50.60M through the MDTF TF-19208 and US\$.74M TF-A6465

Annex 4. Borrower's Comments

The government sent suggested edits to the ICR document and these have been reflected in the report.

Annex 5. Program Action Plan (PAP)

Action Description	Responsible Party	Completion Measurement	Original / Added at AF	Completed
Intermediate Results Area 1: Enhanced Enabling Environment and Expand Private Sector Role and Capacities				
1.1 Finalize RAB and NAEB Strategies	RAB, NAEB	Approved strategies	Original	Yes
1.2 Prepare position paper on strategic PPP to pursue in the sector	MINAGRI	Position Paper	Original	Yes
Intermediate Results Area 2: Evolving Public Sector Institutional Roles and Enhanced Capacities				
2.1 Ensure the reforms / strategic plans of RAB and NAEB are completed and implemented, including appropriate integration with the ongoing restructuring	RAB, NAEB	New structure in place	Original	Yes
2.2 Complete integration of independent SPIUs into RAB, NAEB structure (and support implementation of action plan for smooth transition, integration, and capacity development)	MINAGRI, Public service reform commission	On-going restructuring completed, approved and implemented	Original	Yes
2.3 Prepare and implement capacity development plan for decentralized reforms / restructuring	MINAGRI, MINALOC	Preparation capacity development action plan for Districts; implementation of key milestones of the action plan	Original	Yes
Intermediate Results Area 3: O&M Challenges and Requirements				
3.1 Confirm all rural sector infrastructure investments have adequate O&M arrangements	MINAGRI (in collaboration with MININFRA)	Report (to be prepared by MINAGRI, in collaboration with MININFRA)	Original	Yes

3.2 Implement O&M monitoring system to monitor O&M of major rural infrastructure (as part of the enhanced MIS for agric. sector)	MINAGRI (in collaboration with MININFRA)	Periodic MIS Reports (to include monitoring indicators of O&M of rural infrastructure)	Original	Yes
3.3 Conduct well-focused capacity development/training activities of farmer-level organizational structures on O&M capacity mechanisms	MINAGRI (in collaboration with MININFRA)	Capacity development action plan prepared and approved	Original	Yes
Intermediate Results Area 4: Fiduciary, Environment and Social Systems				
4.1 Prepare an operational action plan to address and strengthen relevant fiduciary aspects, with an emphasis on District-level capacities	MINAGRI in collaboration with key actors	Action plan	Original	Yes
4.2 Provide on-the-job training to District Accounting staff focusing on the consolidation of non- budget agencies at District level.	MINALOC districts	Improvement of the accounting and audit reports of Districts	Original	Yes
4.3 Assess the risk prone areas of the Program at the District level and develop a risk profile to be monitored through the Program life ensuring that timely mitigation measures are undertaken	MINECOFIN (OGCIA)	Strengthen internal controls capacities to deter internal control risks	Original	Yes
4.4 Reconcile the accounting/ financial statements before and after merger of both RAB and NAEB	MINAGRI, RAB, NAEB	Eliminate annual adverse audits from legacy issues	Original	Yes
4.5 Implement the agreed fiduciary, including fraud and corruption systems actions	MINAGRI	Report produced	Original	Yes

4.6 In collaboration with participating ministries and agencies develop a consolidated Environmental and Social Implementation Manual based on existing government guidelines; and conduct training on the understanding and application of this Manual at the National and District level.	MINAGRI, MINALOC, MINARENA / REMA	Capacity development / training	Original	Yes
4.7 Develop and implement a communications strategy to sensitize stakeholders about the Program and complaints mechanism	MINAGRI	Communications strategy developed	Original	Yes
4.8 Develop and maintain a database of complaints and responses. Implementing agencies and Districts to report to MINAGRI on F&C complaints on a quarterly basis	MINAGRI	Evidence of data collection and management	Original	Yes
4.9 Provide on-the-job training and capacity strengthening to OM and RPPA investigators on annual basis	RPPA OM	Strengthened capacity of investigators	Original	Yes
4.10 Design feasibility studies for large programs investment and propose a system for project preparation, appraisal and approval for all investments	MINECOFIN / MINAGRI / RAB PforR Governance	Feasibility undertaken	Added at AF	Yes
4.11 Develop PFM learning and retention strategy	Accountant General's Department PforR Governance	Strategy developed	Added at AF	Yes
4.12 Submit status of implementation of audit	RAB and NAEB	Reports submitted	Added at AF	Yes

recommendations to World Bank quarterly.				
4.13 Implement eProcurement system at implementing entities.	MINECOFIN	System implemented	Added at AF	Yes
4.14 Undertake institutional analysis of key units and delivery agencies including RAB.	MINAGRI	Institutional analyses produced	Added at AF	Yes
4.15 Develop and implement an action plan in response to PER recommendations.	MINAGRI and MINECOFIN	Action plan implemented	Added at AF	Yes
4.16 Update ESIM guidelines to include issues of small dams. Undertake training of MINAGRI and District Staff	MINAGRI	Training completed	Added at AF	Yes
Intermediate Results Area 5: Agriculture Expenditure and Financing Framework				
5.1 MINAGRI to work closely with MINECOFIN to strengthen the ag. public expenditure planning and budgetary allocation system to ensure adequate and prioritized levels of funding to PSTA 3. An improved planning and budgetary process has been introduced since 2013/14 and TA support (from USAID and IFAD) to MINAGRI will provide further improvements. In addition, there will be intensified government-DP dialogue as part of the budgetary cycle in support of the PSTA 3 requirements.	MINECOFIN Annual Planning and Budgetary cycle calendar (September – May)	Formulation and approval of annual budget and updated MTEF for each annual budgetary cycle	Original	Yes

Annex 6. Results Framework Indicators (KPIs/DLIs targets and actuals per year)

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
Program Development Objective: The PDO is to <i>increase and intensify the productivity of the Rwandan agricultural and livestock sectors and expand the development of value chains.</i>						
PDO Indicator 1: Increased agr. land under modernized agricultural technologies	%	24	27	31	34	34
Actual:		-	27	29	24	31
PDO Indicator 2: Increased agriculture exports	%	22	23	24	25	25
Actual:		-	7	21	6	23
Intermediate Results Area 1: Agriculture and animal resource intensification: (i) Soil erosion reduced and land sustainably managed; (ii) Land productivity for priority crops increased; (iii) Animal productivity increased and animal products diversified.						
KPI1 (DLI 1): Increased soil erosion control, based on agreed technical standards, & sustainably maintained (P: Progressive; R: Radical; T: Total)	ha	802,292 (P) 46,246 (R) 848,538 (T)	835,941 (P) 54,044 (R) 889,985 (T)	869,590 (P) 61,842 (R) 931,432 (T)	903,240 (P) 69,640 (R) 972,880 (T)	919,561 (P) 103,981 (R) 1,023,479 (T)
Actual:		-	846,476 (P) 64,590 (R) 911,066 (T)	894,213 (P) 82,565 (R) 976,778 (T)	913,212 (P) 103,918 (R) 1,017,130 (T)	923,604 (P) 110,041 (R) 1,033,645 (T)

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
KPI 2 (DLI 2): Increased land (hillsides/H & marshlands/M) developed with: (i) irrigation infrastructure, based on MINAGRI technical standards; and (b) with enhanced O&M	ha	3,075 (H)	4,075 (H)	5,075 (H)	6,075 (H)	8,500 (H)
		24,721 (M)	26,521 (M)	28,321 (M)	30,121 (M)	36,000 (M)
		27,796 (T)	30,596 (T)	33,396 (T)	36,196 (T)	44,500 (T)
Actual:	-	4,807.3 (H) 27,005(M) 31,812 (T)	6,130 (H) 29,277 (M) 35,407 (T)	8,392 (H) 35,161 (M) 43,553 (T)	11,987 (H) 36,521 (M) 48,508 (T)	
KPI 3 (DLI 3): Increased average productivity levels of major food and export crops, and livestock commodity	-	Cassava: 15 t/ha	Cassava: 16t/ha	Cassava: 17t/ha	Cassava: 18t/ha	Cassava: 19 t/ha
		Coffee: 2.2 kg/tree/yr	Coffee: 2.3kg/tree/year	Coffee: 2.5 kg/tree/year	Coffee: 2.7 kg/tree/year	Coffee: 2.9 kg/tree/year
		Milk: 4l/cow/day	Milk: 4.5l/cow/day	Milk: 5.0 l/cow/day	Milk: 5.5 l/cow/day	Milk: 6.21 l/ cow/day
Actual:	-	Cassava: 16.3 t/ha Coffee: 2.4 kg/tree/year Milk: 5.1 l/cow/day	Cassava: 17.8 t/ha Coffee: 2.6 kg/tree Milk: 5.7 l/cow/day	Cassava: 18.97 t/ha Coffee: 2.84 kg/tree/year Milk: 5.7 l/cow/day	Cassava: 19 t/ha Coffee: 2.8 kg/tree/year Milk: 6.3 l/cow/day	

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
KPI 4: Increased total milk production	l	503,000	532,467	561,934	591,400	780,000
Actual:		-	555,691	724,624	756,288	816,791

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
Intermediate Results Area 2: Research, technology transfer and organization of farmers: (i) Improved technologies which are responsive to Rwanda's agro-ecological potential, men and women farmer needs and resources, and market prospects; (ii) Enhanced integrated and market- oriented extension and advisory services which result in higher proportion of farmer adoption of improved technologies, for both men and women; and (iii) Strengthened inclusive and business-oriented farmers' organizations/cooperatives with enhanced entrepreneurial skills for effective engagement in input and output markets.						
KPI 5 (DLI 4): No. of enhanced technology innovations (TI) introduced by public and/or private sectors, and adopted (A) by farmers (adoption rates to be shown by gender)	TI # A %	5 (25%)	3 (25%)	3 (40%)	4 (50%)	6 (70%)
Actual:		-	5 (27%)	4 (45%)	5 (61.8%)	6 (54.5%)
KPI 6: Increased % of cooperatives/farmers' organizations which are graded A and B (includes gender dimension)	%	5	15	25	35	-

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
Actual:		-	N/A	18	TBD	54 (grading not available)
Intermediate Results Area 3: Private sector-driven value chain development and expanded investments: (i) Enhanced business environment for expanded agricultural investments and value addition; and (ii) Competitive and private sector-driven value chain development and expanded commercialization of production for domestic and export markets, enabled by expanded access to finance, efficient and effective agricultural marketing systems and improved rural infrastructure, and expanded successful public-private partnerships (PPPs).						
KPI 7: Increased value (total production and exports) of major competitive value chains	US\$	VP: 2.3 b VE: 132 m	VP: 2.6 b VE: 154 m	VP: 2.7 b VE: 176 m	VP: 3.2 b VE: 198 m	VP: TBD VE: 309 m
Actual:		-	VP: 2.398 b VE: 223 m	VP: 2.44 b VE: 272 m	VP: 2.532 b VE: 289.5 m	VP: 2.873 b VE: 356.5 m
KPI 8 (DLI 5): Increased agri-finance lending for farmers (including gender targets);	Amount (US\$ m)	3.6	4.8	5.9	7.0	-
Actual:		-	6.1	7.4	7.0	N/A
KPI 9: Increased private sector investments in ag. sector (domestic and foreign)	US\$	513 m	613 m	713 m	813 m	730 m
Actual:		-	580.2 m	621.6 m	679.3 m	758.5 m

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
KPI 10: Increased % of agric. production marketed	%	21	29	30	31	25
Actual:		-	31	21	24	23
Intermediate Results Area 4: Institutional results-focused development and strategic cross-cutting issues: (i) Enhanced capacity of sector and its institutions to deliver efficient and effective agricultural services; (ii) Strengthened MIS to support more efficient and effective management of the agricultural sector; (iii) Improved policy environment for enabling rapid, private sector-driven and sustainable agricultural growth; (iv) Increased public ag. expenditures and enhanced expenditure composition and effective management; (v) Improved food security and nutrition; and (vi) Enhanced inclusion of women in agricultural activities and expanded access to agricultural services.						
KPI 11: Enhanced results-focused institutional capacity development/CD of MINAGRI (M) & Districts (D): Action Plan (AP) updated/ prepared (UP); AP implementation initiated (II) & AP fully operational (FO)	AP	Non-existent in MINAGRI and Districts	MINAGRI to develop draft Action Plan DISTRICTS Action Plans updated	MINAGRI Action Plan Updated & Implementation initiated; D AP UP & II	MIS Framework and supporting Action Plan partially developed (with "core" indicators to be agreed and launched)	MIS rolled out into 30 districts and producing regular reports by end of June 2016
Actual:		-	M& D AP updated and framework prepared (UD)	M&E Framework approved, MIS developed and initiated	MIS Framework and supporting Action Plan partially developed Core indicators have been defined and agreed upon	M&D AP FO The target has been met at 100% because MIS was rolled out into 30 districts and is

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
						producing regular reports.
KPI 12 (DLI 6): Updated MIS Framework (FR) & Action Plan (AP) for agric. sector: completed (C), approved (A), initiated (I) & fully operational (FO, with key reports, on “core” indicators)	FR AP I FO	Initial draft M&E Framework	Draft M&E FR	FR/AP (C, A, Implementation initiated)	MIS Framework and supporting action Plan partially developed (Core indicators to be agreed on and launched)	MIS rolled out to 30 districts and producing regular reports by June 2017.
	Actual:	-	Draft M&E Framework prepared	M&E Framework approved. MIS development initiated.	Framework supporting Action Plan partially developed (Core indicators have been refined and agreed upon) System to be launched in Oct 2016.	MIS functional in all 30 districts.

Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
KPI 13 (DLI 7): Approval of Seeds (S), Fertilizer (F) & Ag. Finance (AF) Policy, action plan (AP) prepared & implemented (I)	Policy	Seeds (S) Policy does not exist Initial draft of Fertilizer (F) Policy No existing policy on Ag. Finance (AF)	F complete & approved P, AP, I	S complete & approved P, AP, I	Key aspects of the Seed Policy and Fertilizer Policy implemented according to agreed action plans TOR for AG Finance Strategy agreed and approved by the end of April 2016	Approval of AF strategy by the end of Aug. 2016. The new and approved National Ag. Policy would incorporate the enhanced policies for Seeds, Fertilizer and Ag. Finance
			F complete & awaiting approval	S complete validated by the ASWG and awaiting cabinet approval. Aspects of the seed and Fertilizer action plans were being implemented		
Actual:		-				S, F, AF report presented to the ASWG to be included into the NAP.
KPI 14: Increase in Women's Empowerment in Agriculture Index for Rwanda	Index (%)	91	91.5	92	92.5	93

Actual:	-	91	TBD	TBD	TBD
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Results Indicators	Unit	Baseline 2012/13	Target (2013/14)	Target (2014/15)	Target (2015/16)	Target (2016/17) (Added at AF)
KPI 15: Increased % of households with acceptable levels of food consumption	Food Cons. Score (%)	79	80	81	81	82
Actual:		-	-	74	TBD	TBD
DLI 8: The approved National Agricultural Policy, Action plan (AP) prepared (P) and approved (A)	-	-	N/A	N/A	Agreed and approved TOR for the NAP including key milestones by end of June 2016	NAP Approval by ASWG June 30, 2017.
Actual:		-	N/A	N/A	The TORs have been prepared and approved and the exercise to review the NAP is on-going. Green paper to be ready by Oct. 2016.	The NAP was approved by the ASWG in June 2017.

Annex 7. Supporting Documents (if any)

- Coffey International Development (2013): Capacity Needs Assessment for MINAGRI.
- FAO (2018, November 5): *FAOstat*. Retrieved from FAOstat:
<http://www.fao.org/faostat/en/#data/QL>
- FAOstat (2017, August 14): *Food and Agriculture Organisation*. Retrieved August 14, 2017, from FAOstat - Crops: <http://www.fao.org/faostat/en/#data/QC>
- FAOstat (2017, August 15): *Food and Agriculture Organisation*. Retrieved August 15, 2017, from FOAstat - Livestock Primary: <http://www.fao.org/faostat/en/#data/QL>
- FAO (2013): *Cassava: Save and Grow*. Rome: Food and Agriculture Organisation of the United Nations.
- Government of Rwanda (2018): Borrower Implementation Completion Report for the Program for Results.
- Guardian. (2013, March 28). *Cassava can become Africa's new cash crop*. Retrieved August 14, 2017, from Guardian: <https://www.theguardian.com/global-development-professionals-network/2013/mar/28/cassava-food-security-sub-saharan-africa>
- IEG (2018): Rwanda Country Program Evaluation FY09-17. Washington DC, USA.
- IEG (2016): Program for Results. An Early-Stage Assessment of the Process and Effects of a New Lending Instrument. Washington DC, USA.
- Innocent Nzeyimana, A. H. (2016). Mulchin as a strategy to improve soil properties and reduce soil erodability in coffee farming systems of Rwanda. *Catena - Journal of Soil Science - Hydrology - Geomorphology focusing on Geoecology and Landscape Evolution*.
- Isner, C. (2017): Agricultural Sector of Rwanda Institutional Assessment (Draft). Kigali, Rwanda.
- JETRO. (2013, September 25). *Japan External Trade Organisation*. Retrieved August 15, 2017, from Rwanda Coffee Presentation:
https://www.jetro.go.jp/ext_images/world/africa/seminar_reports/pdf/20130925_Rwanda.pdf
- MINAGRI (2010): Agriculture Gender Strategy. Kigali, Rwanda.
- NAEB (2017): Annual Report 2016-17. Kigali: National Agricultural Export Development Board.
- NAEB (2016): Annual Report 2015-16. Kigali: National Agricultural Export Development Board.
- NAEB (2015): Annual Report 2014-15. Kigali: National Agricultural Export Development Board.
- NAEB (2014): Annual Report 2013-14. Kigali: National Agricultural Export Development Board.
- NAEB (2013): Annual Report 2012-13. Kigali: National Agricultural Export Development Board.
- NAEB (2012): Annual Report 2011-12. Kigali: National Agricultural Export Development Board.
- NISR. (2017): Statistical Yearbook 2017. Kigali: National Institute of Statistics Rwanda.
- NISR. (2017): Seasonal Agricultural Survey. Kigali: National Institute of Statistics Rwanda.
- NISR. (2016): Seasonal Agricultural Survey. Kigali: National Institute of Statistics Rwanda.
- NISR. (2015): Seasonal Agricultural Survey. Kigali: National Institute of Statistics Rwanda.
- NISR. (2014): Seasonal Agricultural Survey. Kigali: National Institute of Statistics Rwanda.
- NISR. (2013): Seasonal Agricultural Survey. Kigali: National Institute of Statistics Rwanda.
- Republic of Rwanda (2018a): National Agricultural Policy. Kigali, Rwanda.
- Republic of Rwanda (2017): National Agribusiness Investment Promotion Strategy. Kigali, Rwanda.
- Republic of Rwanda (2017a): Imihigo Evaluation FY2016/2017. Kigali, Rwanda.
- Republic of Rwanda (2016): Rwanda Agriculture Public Expenditure Review.

Republic of Rwanda (2016a): Imihigo Evaluation FY2015/2016. Kigali, Rwanda.

Republic of Rwanda (2013): Strategic Plan for the Transformation of Agriculture in Rwanda Phase
 Republic of Rwanda (2013): Economic Development and Poverty Reduction Strategy 2. Kigali, Rwanda.

Republic of Rwanda (2000): Rwanda Vision 2020. Kigali, Rwanda.

UNIQUE (2017): Review of the Agriculture Program for Results. Freiburg, Germany.

World Bank (2018): Creating Markets in Rwanda: Country Private Sector Diagnostic. Washington DC, USA.

World Bank (2018a): Agriculture Finance Diagnostic Rwanda. Washington DC, USA.

World Bank (2018b): Bank Guidance – Implementation Completion and Results Report for Program for Results Operations. Washington DC, USA.

World Bank (2018c): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 08 \(English\)](#)

World Bank (2018d): Land Husbandry, Water Harvesting, and Hillside Irrigation Project, Rwanda. Impact Evaluation Endline Report. Washington DC. USA.

World Bank (2017): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 07 \(English\)](#)

World Bank (2017a): Rwanda Economic Update. Rethinking Urbanization in Rwanda: from Demographic Transition to Economic Transformation. Kigali, Rwanda.

World Bank (2016): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 06 \(English\)](#)

World Bank (2016a): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 05 \(English\)](#)

World Bank (2016b): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 04 \(English\)](#)

World Bank (2016c): Program-for-Results. An Early-Stage Assessment of the Process and Effects of a New Lending Instrument. Washington DC, USA.

World Bank (2015): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 03 \(English\)](#)

World Bank (2015a): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 02 \(English\)](#)

World Bank (2015b): [Rwanda - Transformation of Agriculture Sector Program Phase 3 PforR : P148927 - Implementation Status Results Report : Sequence 01 \(English\)](#)

World Bank (2015c): Bank Policy „Program for Results Financing“. Washington DC, USA.

World Bank (2015d): Bank Directive “Program for Results Financing”. Washington DC, USA.

World Bank (2015e): Program for Results: Two Year Review. Operations Policy and Country Systems. Washington DC, USA.

World Bank (2014): Transformation of the Agriculture Sector Program Phase 3 Program for Results. Program Appraisal Document. Washington DC, USA.

World Bank (2014a): Country Partnership Strategy for the Republic of Rwanda for the Period FY2014-FY2018. Washington DC, USA.

World Bank (2014b): Rwanda Agriculture Policy Note. Promoting Agricultural Growth in Rwanda: Recent Performance, Challenges and Opportunities. Washington DC, USA.

World Bank (2013): Rwanda Economic Update. Maintaining Momentum with a Special Focus on Rwanda’s Pathway out of Poverty. Washington D.C.

World Food Program (2018): Comprehensive Food Security and Vulnerability Analysis (Draft). Kigali, Rwanda.