Report Number : ICRR0022273

1. Project Data

Project ID	Project Name	
P148927	RW: Transform of Agric. Sect. Prg Phase3	
Country	**Practice Area(Lead)**	**Additional Financing**
Rwanda	Agriculture and Food	P161000

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IDA-55480,IDA-59620,TF-19208,TF-A5936,TF-A6465	31-Mar-2018	200,713,436.24
Bank Approval Date	**Closing Date (Actual)**	
31-Oct-2014	30-Sep-2018	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	150,600,000.00	69,085,803.00
Revised Commitment	205,835,803.00	59,835,803.00
Actual	200,713,436.24	59,835,803.00

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

a. Objectives

The Program Development Objective (PDO) of the Rwanda Transformation of Agriculture Sector Program Phase 3 (“Agriculture PforR”) as stated in the Financing Agreement dated November 11, 2014 was **“to increase and intensify the productivity of the Rwandan agricultural and livestock sectors and expand the development of value chains”**, in line with the Project Appraisal Document (PAD) dated October 9, 2014.

This PDO was not revised during implementation and is hence adopted for this ICR Review.

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

No

c. Components

The Agriculture Program-for-Results (PforR) contributed to the Government of Rwanda's (GoR) Third Phase of the Transformation of Agriculture Sector Program (known by its French acronym, PSTA 3), which was a national program that covered the five-year period 2013/14 to 2017/18. It built on the previous two phases of IPF lending operations that supported the PSTA 1 and PSTA 2. The Agriculture PforR was designed to support all PSTA 3 programs (ICR, paras 4 and 5). Hence, its intermediate results areas were identical with the four components of the PSTA 3 (PAD, Annex 4):

i **. Agriculture and Animal Resource Intensification:** Appraisal estimate: USD628 million. This program aimed at improving practices for soil conservation, land husbandry, irrigation and water management, and supported inputs like mechanization, agrochemicals and markets, as well as seeds and livestock development. Those activities were a continuation and refinement of those carried out under PSTA 2.

ii **. Research, Technology Transfer and Organization of Farmers:** Appraisal estimate: USD87 million. This program aimed at supporting research, technology transfer, and professionalization of farmers as they are main drivers of agriculture and animal resource intensification and food and export value chains.

iii **. Private Sector-Driven Value Chain Development and Expanded Investments**: Appraisal estimate: USD382 million. This program aimed at creating an environment to attract private investment, encourage entrepreneurship, and facilitate market access, develop priority food and export crop, dairy, meat, fisheries, and apiculture value chains, increase access to agri-finance and market-oriented infrastructure for post-harvest to enhance production, productivity, and value addition.

iv **. Institutional Results-Focused Development and Cross-Cutting Issues:** Appraisal estimate: USD104 million. This program aimed at supporting institutional capacity building, decentralization in agriculture, a legal and regulatory framework, agricultural communication statistical systems, M&E and knowledge management, environmental mainstreaming in agriculture, and nutrition and reducing household vulnerability to promote agricultural sector growth.

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

Project Cost and Financing. At appraisal in October 2014, the total cost for the Agriculture PforR was estimated at US$1,200 million, of which US$100 million were expected from new IDA credit financing

through the PforR instrument, US$194 million from existing IDA credit financing[1], US$300 million from borrower contribution by the GoR, and US$606 million from co-financing by various other donors.[2]In March 2015, a Multi-Donor Trust Fund (MDTF) of US$50.6 million was approved to support the implementation of the Agriculture PforR. Furthermore, in February 2017, an Additional Financing (AF) in the amount of US$46 million from the IDA credit was approved as well as an additional US$9.24 million for the MDTF. At completion, the actual amount disbursed was US$1,218.24 million (102 percent of the appraisal amount), of which US$140.88 million were from the IDA credit, US$59.84 million from the grant financing of the MDTF, US$248.72 million from existing IDA credit financing, US$368.4 million borrower contribution, and US$400.3 from donor co-financing.
Borrower Contribution. At appraisal, the borrower contribution of the GoR was estimated at US$300 million. At completion, actual borrower contribution was US$368.4 million (129 percent of expected borrower co-financing).
Dates and Restructuring. The Agriculture PforR became effective on December 11, 2014 and closed on September 30, 2018. The original closing date was March 31, 2018. It underwent one restructuring -which included an AF- in February 2017 to expand the scope of the program by scaling-up targets for the PDO indicators and DLIs and to accordingly extend the closing date by six months. Specifically, the restructuring led to the following changes for DLIs:

- Scaling-up of targets for productivity objective-related (DLIs 1 to 4)
- Nationwide rolling-out of the Management Information System (DLI 6)
- Review and adjustment of the policies on seeds, fertilizers and financing to align with the new National Agricultural Policy (NAP) (DLI 7)
- Introduction of DLI 8 focused on the approval of an updated National Agriculture Policy (DLI 8)
- No further disbursement allocation for DLI 5 based on the GoR being satisfied with the results achieved (DLI 5)

The restructuring did not alter the PDO or affect the Theory of Change (ToC).

[1] This was related to the ongoing IPF operations in Rwanda: Land Husbandry, Water Harvesting and Hillside Irrigation Project (LWH), Rural Sector Support Project (RSSP) and Feeder Roads Development Project (FRDP).
[2] The PAD page vii lists the details of the US$800 million co-financing as follows: EU (U$160 million), USAID (US$138 million), IFAD (US$120 million), DFID (US$90 million), Netherlands (US$10 million), Swiss (US$6 million), Japan (US$ 32 million), AfDB (US$ million), FAO (US$ 30 million).

3. Relevance of Objectives

Rationale

Alignment with Agriculture Sector Strategy. Agriculture has been a priority to the GoR, given the sector's significant contribution to GDP and poverty reduction (ICR, para 1). To increase the low level of 40 to 50 percent of the country's agricultural production potential at appraisal, the Third Phase of the Transformation of Agriculture Sector Program (PSTA 3) focused on production intensification, research and technology transfer, value chain development, and results-focused sector development. The Agriculture PforR was fully aligned with the PSTA 3 and horizontally financed all its programs and sub-programs, which resulted from Rwanda's strategic document "Rwanda Vision 2020 and the related Second Economic Development and Poverty Reduction Strategy Paper (2013-2018).

At the time of this review, the Agriculture PforR objective remains relevant with the GoR's current follow-on program PSTA 4 (covering the period 2018 to 2024) that includes the priority areas of (i) Innovation and Extension, (ii) Productivity and Resilience, (iii) Inclusive markets and value addition (expanding the PSTA 3 focus to), (iv) Enabling Environment & Responsive Institutions. PSTA 4 builds on PSTA 3 and the contribution of the Agriculture PforR, expanding the focus to knowledge and information further down the value chain (under Priority Area 1), more attention to nutrition sensitive, sustainable, and resilient production (under Priority Area 2), a higher weight of developing insurance, finance, market infrastructure and export readiness (under Priority Area 3), and more strategic evidence-based policymaking to improve planning and coordination processes (under Priority Area 4) (PSTA, page 36). Overall, PSTA 4 promotes a stronger role of the private sector as market enabler, more focus on farm profitability and commercialization, and the adoption of a food systems approach for enhanced nutrition and household food security, amongst other things (PSTA, pages 30 and 31). PSTA 4 is supported by the World Bank-financed Agriculture PforR 2, indicating the continued relevance of the PDO (ICR, para 17).

Moreover, the Agriculture PforR was in line with the FY21-26 Country Partnership Framework (CPF) for Rwanda, which highlights the importance of the sector to modernize, be responsive to market signals, and to more effectively integrate with regional and global markets (CPF, para 40). CPF Objective 4 ("Increased Agricultural Productivity and Commercialization") relates most strongly with the activities supported by the Agriculture PforR and emphasizes their continued relevance for Rwanda's agricultural sector growth. Also, the PforR instrument was relevant to address market failures and drive aspired sector reforms on agribusiness highlighted in the CPF (CPF, para 78), such as increased agri-finance (CPF, para 99), value addition and market orientation of agriculture production (CPF, para 40).

World Bank Previous Sector and Country Experience. The World Bank had supported the previous PSTA 1 (2004-2008) and PSTA 2 (2009-2012) through Investment Project Financing (IPF) operations, accumulating over a decade of experience in Rwanda's agriculture sector needs and strategic priorities. It also acted as co-chair and has been a member of the Agriculture Sector Working Group, which holds monthly meetings and is the main policy dialogue and donor coordination platform for agriculture in Rwanda (PAD PSTA 3, para 20). Additionally, it was well placed to assist the GoR in the PSTA 3 implementation and in improving its systems and processes towards more results-orientation, given its considerable regional knowledge and sector expertise (PAD PSTA 3, para 19 and PAD PSTA 4, para 28).

Country Capacity and Adequacy of PforR instrument. The Agriculture PforR built on the Bank's decade-long engagement in the Rwandan agriculture sector, including support to the PSTA 1 and 2. At the time of appraisal, the country and government systems were considered strong enough to "take the next step" towards the more results-oriented PforR instrument, which was justified by the results of the technical, fiduciary and safeguards assessments (ICR, para 7). The choice of PforR over other financing instruments was taken with the institutional focus of the program in mind, in order to address the remaining risks in the country and government systems (ICR, para 7) and to support the GoR strengthen results-based programs through incentives (PAD PSTA 3, para 18). This intended to incentivize the government towards linking resources with specific results and to allow for further strengthening the capacity of its systems in a broader manner (not just at project level) and in the risk areas identified in the PforR assessments.

Given this was the World Bank's first PforR in agriculture and for the Rwandan sector counterparts in particular, the formulation of the PDO was also pitched at the right level for the country capacity at appraisal, although DLIs could have been stronger (see Relevance of DLIs). Moreover, the choice to support all programs of PSTA 3 is considered adequate, given the long-standing engagement between the Bank and the GoR in the agriculture sector and PSTA financing support.

Rating

High

4. Achievement of Objectives (Efficacy)

Objective 1

Objective

Increased and intensified productivity of the Rwandan agricultural and livestock sectors and

Rationale

At appraisal, Rwanda's agricultural productivity had "considerable potential to accelerate" (PAD, para 3), as it was at 40 to 50 percent of the country's agricultural production potential (ICR, para 2). Productivity increases, value chain development and high-value commodity production were highlighted as "essential to secure further reductions in rural poverty and to convert the largely subsistence sector to a more knowledge-intensive, competitive, and market-oriented sector" (PAD, paras 4 and 7). The PAD highlighted several constraining factors, including high prevalence of subsistence farmers with mostly rainfed production systems in need of modern practices, small production units, and the country's limited arable land and environmental concerns which called for focusing on intensification instead of extending the agricultural frontier (PAD, para 5). In addition to these farm-level constraints, there were several institutional constraints, such as weak technology transfer packages targeted to increase on-farm agricultural productivity, and agencies' low capacity and experience with results-focused policy-making measures.

Theory of Change. To address the above constraints and improve productivity in agriculture and livestock, the Theory of Change (ToC) focused on the activities of the Agriculture PforR Results Area 1 "agricultural and animal resource Intensification" and Results Area 2 "research, technology transfer and organization of farmers" (ICR, para 11 and Figure 1). Under the former, the first key inputs were the construction of erosion control measures such as terracing and training for their continued adoption. This was expected to lead to a larger land area under erosion control measures (measured by DLI 1) and reduced actual soil erosion, which in turn was anticipated to result in higher productivity and sustainability measured in crop yields (measured by DLI 3 for three major crops in Rwanda). The second key input under Results Area 1 was the construction of irrigation systems and farmer training for their operation and maintenance. The resulting larger land area with irrigation systems (measured by DLI 2) was expected to intensify production performance and to result in higher crop yields. The input of Results Area 2 relevant to Objective 1 were focused on farmer field school trials of improved agricultural technologies adapted to Rwanda's agro-ecological potential and beneficiary farmers' needs (PAD, para 30), the generation and release of agricultural technologies (measured by DLI 4)

and the related training of extension agents, all of which were expected to increase the adoption of improved agricultural technologies among farmers (measured by DLI 4) and as a result to yield increases of crop production.
The ToC for Objective 1 is sound and in line with the sector's notion that the provision of productive infrastructure (e.g. irrigation) and knowledge transfer of improved practices (e.g. erosion measures, agricultural technologies) would lead to a strengthening of producers' capacity and willingness to adopt those technologies on their agricultural land to enhance agricultural productivity, i.e. yields. The ultimate expected impacts of increased yields in the project ToC were increased rural incomes and poverty reduction. The outputs and outcomes towards the achievement of Objective 1 of the Agriculture PforR are described in the following:

Outputs (based on ICR Section II.B, Annex 1 and Annex 6)

- PDO 1: 31 percent (target: 34 percent; baseline: 19 percent) increased agricultural land under modernized agricultural technologies
- DLI 1: 932,604 hectares (target: 919,561 hectares; baseline: 802,292 hectares) of land protected against soil erosion with progressive bench terraces and 110,041 hectares (target: 103,918 hectares; baseline: 46,246 hectares) land protected against soil erosion with radical terraces
- DLI 2: 48,508 hectares (target: 44,500 hectares; baseline: 27,796 hectares) of land on hillsides and marshlands with irrigation according to agreed technical standards
- DLI 3: 19 megatons of cassava per hectare (target: 19; baseline: 15), 2.8 kilograms of coffee cherries per tree per team (target: 2.9; baseline: 2.2), and 6.3 liters cow milk per day (target: 6.2; baseline: 4)
- DLI 4: 6 enhanced agricultural innovation technologies developed and released (target: 6) and 54.5 percent (target: 70 percent) of farmers adopting enhanced agricultural innovation technologies
- 816,791 metric tons (target: 780,000 metric tons; baseline: 503,000 metric tons) of increased milk production
- 23 percent (target: 23 percent; baseline: 20 percent) of households with acceptable levels of food consumption

Outcomes (based on ICR Section II.B, Annex 1 and Annex 6)
Technology Generation, Extension and Adoption. The Agriculture PforR focused on modernizing Rwanda's agricultural research system to address gaps in research-extension linkages that affected the adoption of improved technologies among farmers and to be more market-oriented. For that, it supported research to develop quality seed and planting material for traditional and nontraditional crops, trials on farm fields, market-related research on key commodities, and the development of a system for competitive research funding and a strategy to secure long-term funding support (PAD, page 41, para 11). The ICR does not provide details on specific research- and extension-related activities, but the related results indicators capture that the target of innovation technologies developed and released was met (DLI 4). The Project also supported the dissemination of those technologies among farmers through extension services to stimulate technology adoption. At project completion, the land area under modernized agricultural technologies (PDO 1) and the adoption rate among farmers (DLI 4) were slightly below their respective target but had been on a

continuously increasing trend throughout project implementation. Nevertheless, the ICR highlighted that Rwanda's agriculture sector continues to suffer from "severe underinvestment in agricultural research" (ICR, para 83), that the actual expenditures of PSTA 3 for research were only a mere tenth of its budget of 7.2 percent (ICR, footnote 68), and that more expenditures in the area are needed for the sector to stay competitive and resilient to population density and climate change.

Production Intensification and Increased Productivity. Key areas of engagement of the Agriculture PforR were the investment in two key production intensification measures: soil erosion protection of agricultural land and irrigation infrastructure. The ICR reported that all related targets on those measures were surpassed at project completion (DLI 1 and 2). No evidence was presented on the maintenance of those practices and/or infrastructure of those measures. Yet, immediate faults with terraces or newly installed irrigation systems are considered unlikely and the ICR mentioned related training activities and monitoring of rural infrastructure (ICR, paras 11 and 29). Regarding productivity, the ICR rightfully acknowledges the limitations of PDO indicator 1 on increased agricultural land under modernized agricultural technologies as a single measure and added the results of the productivity related DLIs of 1-4. Most relevant and directly related to the PDO of increased productivity, the ICR reported DLI 3's yield increases -a standard measure of agricultural productivity- for the three commodities that were selected as key in Rwanda's agriculture sector: cassava (key staple food), coffee (most important export crop) and milk (dairy as largest subsector of livestock and strategic for food security). The productivity targets for all three commodities were met or surpassed at project completion. This is strong evidence for the achievement of Objective 1, complemented with the fact that average national yields for those commodities had been on an increasing trend since project start (ICR, page 10 Table 2). As the Agriculture PforR/PSTA 3 operated at national scale, challenging attribution is difficult as it is not possible to obtain counterfactual evidence related to other factors.

Summary. Based on the above-mentioned assessment, the ICR provided evidence (paras 28 to 30) that the project activities contributed to the intensified and increased productivity of the Rwandan agricultural and livestock sectors for selected commodities. Hence, the efficacy of this outcome for Objective 1 is rated Substantial.

Rating

Substantial

Objective 2

Objective

Expanded development of value chains

Rationale

Theory of Change. The Theory of Change (ToC) behind of Objective 2 relates to the activities of the Agriculture PforR Results Area 2 "research, technology transfer and organization of farmers" and Results Area 3 "private sector-driven value chain development" (ICR, para 11 and Figure 1). Under the former, the key input was capacity development for farmer organizations and cooperatives. This was expected to lead to better performance of the agricultural services for farmers and stronger entrepreneurial skills for more "effective engagement in input and output markets" (ICR, page 46) and hence value chain development.

The inputs of Results Area 3 relevant to Objective 2 were two-fold: on the one hand, training of savings and credit cooperatives (SACCOs), which was expected to increase their capacity and as a result to increases in agricultural finance lending (measured by DLI 5), which was assumed to support value chain development. On the other hand, investments in marketing infrastructure such as agricultural storage, processing facilities and roads was expected to improve product quality and enhance farmers' access to markets for better value chain development.

The ToC for Objective 2 is logical. However, the related DLIs are not comprehensive, as they're heavily focused on an increase in agri-finance and approved policies. No measures for farmers' market integration are captured (e.g. expansion to new buyers or markets, more efficient interaction of value chain actors).

Outputs (based on ICR Section II.B, Annex 1 and Annex 6)

- PDO 2: 44.7 percent (target: 25 percent; baseline: 22 percent) increased exports of export commodities (coffee, team, pyrethrum and horticulture)
- USD516 million (target: USD309 million; baseline: USD132 million) increased value (total production and exports) of major competitive value chains
- DLI 5: USD6.8 million (target: USD7.6 million; baseline: 3.6 million) agricultural finance lending for farmers and agricultural enterprises; 66.5 percent (target: 75 percent; baseline: 65 percent) increased agri-finance lending
- USD774.5 million (target: USD730 million; baseline: USD513 million) of private sector investments in agriculture sector
- 23 percent (target: 25 percent; baseline 28 percent) of agricultural production marketed
- 54 percent (target: 35 percent) of cooperatives/farmers' organizations which are graded Category A and 42 percent Category B in the Rwanda Cooperative Agency's classification system for capacities and performance of cooperatives (Grade A is the highest level of performance)

Outcomes (based on ICR Section II.B, Annex 1 and Annex 6)

Increased Exports and Marketed Agricultural Production. The PAD formulated the key measure for Objective 2 as PDO Indicator 2 on the "percentage increase in value of agricultural export commodities", which referred to the annual percentage change in value of Rwanda's agricultural export commodities coffee, tea, pyrethrum and horticulture (PAD, page 58). The end-of-project value of PDO Indicator 2 is largely surpassed in the final year of project implementation. However, the ICR critically discussed the use of PDO indicator 2 due to its susceptibility to external factors like world market prices and added data supporting this argument (ICR, para 31 and Table 4). This is in line with IEG's assessment on the limitations of PDO indicator 2. The ICR expands its analysis by including achievements of various other project results indicators, including on the "percentage of agricultural production marketed". This is relevant, although the indicator falls slightly short of its target. Nevertheless, the ICR did not present evidence on better functioning of agricultural value chains, such as the expansion to new buyers or markets in specific sub-sectors or more efficient interaction of the different value chain actors. Too much emphasis is made of assumptions relating to changes with broad application to the market, rather on specific changes related to the PFORR reforms.

Enhanced Agricultural Finance Lending and Private Investments. The ICR evidence on exports and marketed agricultural commodities was complemented by the results from DLI 5 on "increases in agricultural

finance lending" and the results indicator on "increased private investments". The former had been increasing continuously during project implementation and in 2015 surpassed the end-of year target. However, in the final year agri-finance lending dropped and the target was not achieved. The ICR did not include any qualitative information on the inclusiveness of the support to agri-finance lending, such as for smallholder producers. Private investments in the agriculture sector increased significantly during project implementation, surpassing the respective indicator target. The ICR did not provide an explanation for this increase but referred to the Technical Assessment pointing out that at appraisal that "investments into irrigation, soil fertility, and technology are financially and economically highly attractive" (ICR, para 6). Also, the activities related to Results Area 4 aiming to improve the sector's policy and business environment might be considered to have contributed to this development. Thus, the story is incomplete.
Summary. Based on the above-mentioned assessment, the ICR provided evidence (paras 31 to 34) that the project activities contributed to enhanced agri-finance lending and marketing of agricultural products. However, the evidence for value chain development is limited and reliant on indicators that are influenced by exogenous factors. Hence, the efficacy of this outcome for Objective 2 is rated Modest.

Rating
Modest

Objective 3

Objective
Institutional capacity building

Rationale
One of the objectives of PforR Programs is to strengthen a countries' institutional capacity, even if it is not explicit in the PDO statement. It is therefore important to assess if and how improved institutional capacity, systems, and procedures contributed to improved Program efficacy. In line with this, the ICR of the Agriculture PforR included an assessment on the "implicit objective" of improved institutional capacity and program systems (ICR, paras 35 to 38).
Theory of Change. The Theory of Change and results framework of the Agriculture PforR included activities related to institutional capacity building. In particular, key activities of Results Area 4 were the development and approval of agricultural policies (measured by DLIs 7 and 8), that were expected to enhance the agricultural policy and business environment in Rwanda, which was assumed to enhance policy making and positively stimulate the sector's value chain development. These activities were complemented by the development of a modern Monitoring Information System to enhance performance monitoring and lead to more results-focused decision-making processes within sector institutions.
<u>Outputs (based on ICR Section II.B, Annex 1 and Annex 6)</u>

- DLI 8: Updated National Agricultural Policy 2016 approved by ASWG with supporting implementation plan (target achieved)

• DLI 7: Agricultural policy reforms are implemented: Seeds, Fertilizer and Agricultural Finance policies and Action Plan prepared and implemented (target achieved).
• DLI 6: Updated gender-sensitive management information system for the agricultural sector developed and implemented, functional in 30 Districts and producing regular reports (target achieved)
• Enhanced results-focused institutional capacity development: Action Plan of MINAGRI and Districts Action Plans fully operational (target achieved); Districts' Strategies pending formal approval (target: fully operational)
• 91 percent increase (target: 93 percent increase) of women's empowerment in the Agriculture Index for Rwanda

Outcomes (based on ICR Section II.B, Annex 1 and Annex 6)
Updated/New Sector Policies and Increased Institutional Capacity. The Agriculture PforR supported several activities with the objective to strengthen institutional capacity, based on organizational reviews conducted before and during the Agriculture PforR implementation (ICR, par 57). The development/updating of the National Agricultural Policy and three sector policies were key milestones in this and form an important framework for sector growth and private sector engagement (ICR, para 82), and therefore contributing also to Objective 2 on value chain development. Furthermore, the Program Action Plan of the Agriculture PforR included numerous actions related to strengthening fiduciary, environmental and social systems, evolving public sector institutional roles and capacities. While there were significant delays in some of those actions, they were all finalized at project completion (ICR, para 36 and 38). As examples, the ICR highlighted the progress in the restructuring of the Rwanda Agriculture and Animal Resources Development Board (RAB) and the National Agriculture Export Development Board (NAEB) to enhance country capacity (ICR, para 36) or the development and implementation of the eProcurement System (ICR, para 37). While measured only as an output in DLI 6, the use of the project-supported MIS is described as having "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" (ICR, para 37).
Despite these advances in institutional capacity, the ICR pointed out to analytical reports that revealed remaining shortcomings, such as the need for continuous capacity building on technical, safeguards and fiduciary aspects in particular in the Rwanda Agriculture and Animal Resources Development Board (ICR, para 38). These were taken into account in the design of the follow-on Agriculture PforR2, demonstrating continuity in the tackling of institutional needs in Rwanda's agriculture sector.
Summary. Based on the above-mentioned assessment, the ICR provided evidence (paras 35 to 38) that the project activities contributed to enhanced institutional and systems capacity at different levels. Hence, the efficacy of this outcome for Objective 3 is rated Substantial.

Rating
Substantial

Rationale

Overall Efficacy Rating
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5. Efficiency

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

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 ☐Not Applicable
ICR Estimate		0	0 ☐Not Applicable

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

6. Outcome

The relevance of objectives was High, given the strong alignment of the Agriculture PforR with the government and Bank strategies, the continued World Bank engagement in Rwanda's agriculture sector, and the adequacy of the PforR instrument. Relevance of the DLIs was rated Substantial, given that the overall mix of DLIs reflects reform-orientation and institutional change, despite some DLIs focusing on achievements at the output level. Hence, overall Relevance was rated Substantial. Efficacy of Objective 1 to increase and intensify productivity of the Rwandan agricultural and livestock sectors- was rated Substantial, as most targeted project outcomes were achieved and some exceeded at project completion and the ICR provided plausible evidence. The achievement of Objective 2 to expand the development of the value chain was rated Modest given insufficient outcome evidence. Efficacy of Objective 3 to build institutional capacity was rated Substantial, based on the ICR evidence presented related to enhanced capacity of institutions, policies and systems at different levels. As a result, the combined efficacy rating was Substantial. Therefore, the Outcome rating for the Agriculture PforR was rated as Moderately Satisfactory.

a. Outcome Rating

Moderately Satisfactory

7. Risk to Development Outcome

Climate Change/Environmental risk. Rwanda is increasingly exposed to environmental changes, in particular droughts, which could undermine the accomplishments of soil protection and productivity.
Market risk. In Rwanda's pursuit to promote agricultural value chains, there is a continuous risk of fluctuating export prices. This can adversely affect the sector agents at all levels (from agribusiness to smallholder producer) and private sector development in export-oriented crop production.
Infrastructure Sustainability risk. Project-supported infrastructure such as irrigation systems or roads require sufficient financial and human resources for effective operation and maintenance to ensure improved productivity levels. The ICR reveals that resource limitations for operation and maintenance remain, which can negatively affect agricultural production and productivity.
Research Capacity risk. As mentioned under Efficacy for Objective 1, there is severe underinvestment in agricultural research, which can jeopardize the competitiveness of the Rwandan agricultural sector and related value chains.
Institutional risk. The national government remains highly committed to the PSTA program and the fourth phase is currently under implementation, with support from a World Bank-supported Agriculture PforR2. However, during the Agriculture PforR implementation several issues regarding service delivery and auditing of the Rwanda Agriculture and Animal Resources Development Board (RAB) occurred. The ICR stated that the ongoing Agriculture PforR2 is "addressing this risk proactively and elevated further restructuring of RAB to the PDO level" (ICR, para 36).

8. Assessment of Bank Performance

a. Quality-at-Entry

The Agriculture PforR was the first agriculture operation using the PforR lending instrument. This instrument was appropriate, given that this was the third phase of the government program, whose previous phases had been supported by IPF operations. The design of the Agriculture PforR incorporated lessons from the first two phases of the government program, such as supporting the expansion of the private sector role, pursuing low-cost irrigation options for high-value hillside crops, and strengthening the use and effectiveness of a sector-oriented M&E system (PAD, para 22). Also, the government commitment was demonstrated by its contribution of US$300 million (25 percent of the Agriculture PforR costs).
An Integrated Risk Assessment and Program Action Plan (PAP) were prepared at preparation based on the findings of the Technical Assessment, the Fiduciary Systems Assessment and the Environmental and Social Systems Assessment (ICR, para 6). Several risks were identified at appraisal and assessed to be moderate (ICR, para 99), and associated mitigation measures were incorporated at design. Overall program risk was rated as Moderate at appraisal (PAD, para 101). The arrangements made at appraisal for M&E environmental and social safeguards and fiduciary compliance were appropriate.

However, the ICR rightly points out that a shortcoming of the Technical Assessment at appraisal was that the risk of private sector development and consequent feasible outcomes had been underestimated, given the nascent stage of the private sector at the time (ICR, paras 43 and 73). Further, the capacity of RAB and the Districts, whose responsibilities increased significantly compared to the PSTA2, was overestimated (ICR, para 74), which was demonstrated by the implementation challenges related to RAB. The PforR instrument was not exploited as it might have been to better stimulate a government response to private sector development. DLIs oriented to this goal would have amplified the potential impact.

The implementation arrangements were similar to the IPF supporting the predecessor PSTA2, with the Ministry of Agriculture and Animal Resources (MINAGRI) responsible for overall coordination and two semiautonomous implementing agencies (the Rwanda Agriculture Board and National Agricultural Export Board), three Single Project Implementation Units that implement donor-supported projects and 30 Districts for local program implementation.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

Given the novelty of the PforR instrument for both the Bank task team and the client, the Bank task team adopted a flexible approach and put emphasis on being responsive to emerging issues and needs, such as the restructuring or the Additional Financing (ICR, paras 76 and 77). The task team was proactive and benefited from its good relations with the GoR and development partners to create additional activities related to the Agriculture PforR work, such as the addition of the NAP as a DLI or the development of an Agriculture Public Expenditure Review for Rwanda (ICR, para 76).

Supervision implementation support was generally adequate in terms of a qualified supervision team and missions. However, delays in numerous PAP actions were addressed late, like the actions to address delays in the private sector development activities (ICR, paras 38 and 78). The supervision did not utilize the PforR instrument to the full potential to stimulate a timelier government response to those delays and broader reform, which would have increased the potential impact of the program. Respective lessons on private sector development and the DLI verification process were incorporated into the design of the ongoing Agriculture PforR2 (ICR, para 80).

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The PDO of the Agriculture PforR was clearly defined. The Theory of Change behind the Results Framework and DLIs was clear for Objective 1 (productivity increase) but fell short of a logical result change for Objective 2 (value chain development). The PDO indicators were inadequate and the related DLIs were a mix of mostly output and outcome measures, and their clustering to respective Results Areas partially balanced them out (see Relevance of DLIs). For the implicit Objective 3 (institutional capacity-building) related to Results Area 4, a DLI to incentivize the use of M&E results in policy decision-making could have been considered. Also, the alignment of some KPIs (e.g. on women empowerment and food security) are not clearly framed in the ToC.

MINAGRI was responsible for M&E at the national level and the implementing agencies (the Rwanda Agriculture Board and National Agricultural Export Board, three Single Project Implementation Units) at the subnational level (PAD, para 70).

b. M&E Implementation

Results Indicators were regularly measured and reported. M&E implementation revealed that the harmonization between national and subnational M&E data required further work (ICR, para 67). The development of the MIS (DLI 6) is a key milestone to strengthen M&E capacity in Rwanda's agriculture sector. However, its use for results-based policymaking is still to be seen.

The DLI verification protocol outlined in the PAD was clear and robust. The ICR highlighted related challenges of insufficient budget and human resource capacity for the verification process, also because it is not a core mandate of the PMO (ICR, para 48). The Bank team incorporated lessons from the DLI verification protocol and modified its design in the PforR2 (ICR, 79).

c. M&E Utilization

M&E data were used as a decision tool during implementation and for disbursing against the DLIs during implementation (ICR, para 68). The ICR highlighted that the M&E results were incorporated in the design of the PforR2, in particular for a better-defined focus on private sector development (ICR, para 68).

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The Agriculture PforR activities included civil works, capacity-building and policy reforms. The environmental impact of PforR program interventions like the construction of irrigation systems, agricultural storage, processing facilities and roads were expected to be minor (PAD, para 93). The PAD noted that there were no expected significant adverse impacts on the environment or affected people and the overall environmental and social risks were rated Moderate (PAD, para 93). Also, the Environmental and Social Systems Assessment at appraisal concluded that MINAGRI's environmental and social systems' policies and procedures were adequate (PAD, para 94). However, it highlighted potential shortcomings in terms of lacking "human and financial resources, especially for coordination and monitoring of activities at the local level" (PAD, para 94). This is something that continued to be an issue at closing, as the ICR stated that "continuous capacity development of front-line staff on technical, safeguards and fiduciary aspects is needed" (ICR, para 38).

b. Fiduciary Compliance

Fiduciary management. A fiduciary (financial management and procurement) assessment conducted at appraisal, concluded that the arrangements were satisfactory and of moderate risk (PAD, para 52), based on 13 years of experience in implementing World-Bank supported operations (PAD, para 23). The areas of improvement in fiduciary aspects were largely at District level and the PAP included 14 out of 25 actions related to fiduciary aspects, which were all concluded at program closing (ICR, para 71). The ICR reported that fiduciary arrangements were compliant with World Bank Policy/PforR Directive (ICR, para 71). One issue highlighted in the ICR were the unqualified audit options on RAB and the need for continued reform during the Agriculture PforR 2.

c. Unintended impacts (Positive or Negative)

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d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of M&E	Modest	Substantial	While there were limitations in the framework and some key data was not collected, there were efforts to use the data

		collected and institute improved practices.
Quality of ICR	High	---

12. Lessons

The following lessons are drawn from the ICR with some adjustments in language:
A phased approach from a set of IPF projects to a PforR program can allow for country systems to adapt more effectively and ensure effective M&E. Moving from the IPF to the PforR instrument also challenges the capacity of client countries and raises the bar on what is expected in a set of interventions over time. Hence, a geographically or thematically narrower and less complex scope for the “initial PforR” would allow institutions and systems to adapt over time and strengthen the preparation for highly relevant PforR-related processes, such as the M&E system and DLI verification process. A phased PforR approach could acknowledge increased capacities and gradually expand coverage over time.
PforR programs should identify and focus on those activities within typically complex government programs that can incentivize reform. PforR operations often horizontally support large and complex government programs and attributing outcomes to specific PforR-supported activities is difficult. Hence, designing a clear PDO and logical Theory of Change is key to understand which activities were the triggers for reform processes oriented towards PDO achievement. Or else, the PforR risks “going unnoticed” in the government program without clear means to steer the direction towards its PDO.
The M&E system and DLI verification requires a transparent and robust criteria-based process. The DLI verification is a key aspect of PforR programs, both for disbursements and credibility of the instrument. It allows for improving the accountability and transparency of the government. To ensure that, the process could:

- involve a verifying entity which has the mandate, capacity and experience to conduct verification of development programs
- be transparent by detailing the methodology for the reported status of the DLIs
- recognize and incorporate qualitative material in telling the performance story
- allocate adequate staff time and financial resources.

PforR programs can be a catalyst for donor coordination in supporting government programs. The generally larger PforR programs can facilitate better coordination among development partners to develop a common approach in alignment with government priorities. Such harmonization of donor support towards a government program can be a welcome and efficiently approach for client countries.

13. Assessment Recommended?

Yes

Please explain

First Agriculture PforR program of World Bank.

14. Comments on Quality of ICR

The ICR was well-structured according to guidelines. It was comprehensive yet concise and internally consistent for a complex program. The logic of the program was explained well in the ex-post Theory of Change and its coherence with the previous phases of interventions well presented. The ICR provides the reader with a good technical understanding and rationale of the program activities. Moreover, the ICR candidly identifies and discusses weaknesses, such as the selection of some PDO indicators/DLIs and draws on secondary evidence to underline its conclusions.

a. Quality of ICR Rating

High