Report Number: ICRR0023935

1. Project Data

Project ID	Project Name
P147157	BR BAHIA SUSTAINABLE RURAL DEVELOPMENT
Country	**Practice Area(Lead)**
Brazil	Agriculture and Food

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IBRD-84150	31-Mar-2021	150,000,000.00
Bank Approval Date	**Closing Date (Actual)**	
27-Jun-2014	30-Dec-2022	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	150,000,000.00	0.00
Revised Commitment	150,000,000.00	0.00
Actual	150,000,000.00	0.00

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

a. Objectives

As per the Project Appraisal Document (PAD, 2014) and Loan Agreement (LA, 2014), the Project Development Objective (PDO) of the Brazil Bahia Sustainable Rural Development Project was to: *increase market integration, net revenues, and food security of organized beneficiaries; as well as to improve access to water supply and sanitation services of households in Project areas.*

To assess the extent to which the objective of this project was achieved in this Review, the PDO has been parsed into:

Objective 1: to increase market integration and net revenues of organized beneficiaries.

Objective 2: to increase food security of organized beneficiaries.

Objective 3: to improve access to water supply and sanitation services of households.

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

Yes

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

No

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Productive Inclusion and Access to Markets (*Appraisal Estimate: US$153 million of which IBRD: US$64.2 million; Actual Cost: US$176.56 million of which IBRD: US$49.24)*. This component aimed to support farmers, including those from disadvantaged communities by linking them to markets and promoting their engagement in productive economic activities. The support would be provided through two types of grant mechanisms based on the needs of the Producer Organizations (POs): (a) market-oriented sub-projects; and (b) socio-environmental sub-projects. Prior to investment, grants would be provided to POs in preparing business and investment plans. In addition, TA would be provided for market infrastructure such as warehouses and other logistics.

Component 2: Household Water and Sanitation (*Appraisal Estimate: US$68.9 million, of which IBRD: US$56.2 million; Actual: US$59.77 million, of which IBRD: US$48.33 million)*. This component aimed to improve water supply and sanitation services in underserved rural communities. It would finance feasibility studies, engineering designs, works and supervision for WSS in three Centrais. Centrais are non-profit community water centers, which combine community mobilization and technical expertise to address water access constraints faced by under-served rural communities. The component would also support building capacity of community associations and the Autonomous Water and Sewer System (SAAE) responsible for managing the additional water supply systems in the project areas.

Component 3: Institutional Development, Technical Assistance and Project Management. *Appraisal Estimate:US$34.7 million, of which IBRD: US$ 26.2 million; Actual: US$60.14 million , of which IBRD: US$52.42 IBRD.* This component aimed to finance: (a) capacity building of staff of key agencies (e.g., Bahia State Company for Development and Regional Action (CAR) and other participating agencies) including on project management; (b) market research and analytics in relevant areas covered by the project (e.g., assessment of social and environmental impacts); (c) dissemination of project results; and (d) studies on policy actions to be included on a proposed Development Policy Lending on “Strengthening

Public Sector Management and Promoting Inclusive Service Delivery (P147272)" to be supported by the Bank.

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

Project costs: The total project cost at approval was US$260 million (ICR, Data sheet). The actual cost at closing was US$296 million (Annex 3) with US$150 million financed through the IBRD loan, and the GoB and POs contributing US$134.5 million and US$12 million, respectively. According to the ICR (para 22), three factors contributed to cost differences: (a) Depreciation of the Brazilian Real against the US dollar; (b) increased Government counterpart funding; and (c) Cost for Household (HH) water connection lower than estimated.

Financing: Per the Loan Agreement (LA, 2014), IBRD credit (Credit No. 84150) of US$150 million was estimated to finance the project. At project closing, Bank financing remained the same.

Borrower Contribution: Borrower contribution during appraisal was estimated to be US$110 million. At project closing, it amounted to US$134.6 million.

Dates: The project was approved on June 27, 2014, and became effective on September 30, 2014. The Mid-term Review (MTR) was conducted on May 18, 2018. The original closing date was March 31, 2021, but with extension, it closed on December 30, 2022.

Restructurings: The project was implemented over a period of 8.5 years and went through two level 2 restructurings on May 25, 2017, and February 02, 2021. The details are as follows:

First Restructuring: In the original legal agreement of the project, the Bahia State Company for Development and Regional Action (CAR) was responsible for carrying out of WSS infrastructure investments under Component 2. However, the State Law No. 13.204 that was approved in 2014 modified the organizational structure of Bahia's administrative and executive branches and gave responsibility to Bahia Water and Sanitation Engineering Company (CERB) to deliver water supply and sanitation services in rural areas. The first restructuring of the project was done to include CERB as a co-implementing agency. This restructuring also revised some PDO and intermediate indicators and updated the Results Framework (see below) to address errors with some target numbers recorded incorrectly at project approval and respond to delays in launch of some project activities. Additionally, two new indicators were added under Component 1 (Restructuring Paper 2017, ICR, para 23,24, 27, Annex C):

- *PDO Indicator 1 "Increase in the total number of formal contracts integrating beneficiary Producer Organizations (POs) into markets (No.)":* The target for the sub-indicator for female participation was reduced aligning with the results of the first "Call for Expression of Interest" (CEI) for subprojects. The revision changed the target from 180 to 120.
- *PDO Indicator 2: "Increase in the real net revenue of beneficiary Rural Producer Organizations (POs)(Percentage)". The* target for the sub-indicator for female participation was missing from the approved PAD, which was added (10%).
- *PDO Indicator 4 "New piped household water connections that are resulting from the project intervention (No.)"*: Target numbers were adjusted according to the number of active water

connections in October 2016. End target increased from 350 to 8,000. Female participation was reduced from the original target of 30% to 15% based on estimated percentage of families led by females.
- *PDO Indicator 5 "People provided with access to improved sanitation facilities under the project (No.)"*: The target for this indicator was revised to align with the target for new piped household water connections (PDO indicator 4). The target was reduced from 17,000 to 8000. Targets for female led HHs were also reduced accordingly to 1,200 from 5,100. The same indicator was additionally measured for 'rural areas' which was dropped given all target beneficiaries were rural people.
- Two new indicators were added: (i) Direct beneficiaries of Component 1: 34,250 (10,275 female participation); (ii) Share of vulnerable and marginalized people of the total project beneficiaries of Component 2: 9,933
- Targets for several intermediate indicators were revised either because they were incorrect in the PAD or due to the delay in some activities. Some of the examples are as follows: (a) Direct beneficiaries: reduced from 56,000 to 40,000; Business plans and investments plans implemented by POs and CAs: reduced from 750 to 400 (for female-led POs and CAs target reduced from 225 to 120) due to the delay in completion of the plans; (c) Increase in yearly sales volumes through contracts from beneficiary POs (%) reduced from 20 to 15.

<u>Second Restructuring</u>: At the request of the Government, the project was restructured the second time to extend the project closing date by 21 months, reallocate loan resources, and revise the Results Framework. The Restructuring Paper (June 2021) states that COVID-19 pandemic which started in March 2020 led to suspension of project activities. Reallocation of resources were needed to address changes in component costs. The key changes were (ICR, Annex 1C, Information shared by project team with IEG:

- *PDO indicator 4 "New piped household water connections that are resulting from the project intervention (No.)":* Target was increased from 8,000 to 23,000. The rationale for the increase was because of cost of new connections turned out to be lower than originally estimated.
- *PDO indicator 6* "Piped water connections recovered by the project (No.)". New indicator added to reflect the additional investments included in the project for rehabilitation of existing water supply systems.
- *Intermediate indicator "Clients who adopted an improved agricultural technology promoted by the project (No.)":* Target was increased from 400 to 7,000 to account for large number of subprojects where beneficiaries adopted improved technologies.
- Two new intermediate indicators were added: (a) Total direct project beneficiaries (No.) (Target: 129,250; female beneficiaries: 38,775; Beneficiaries from vulnerable and marginalized groups: 35,583; (b) Total direct project beneficiaries Component 1: target: 34,250 (disaggregated by gender and marginalized groups; (c) Total direct project beneficiaries (No.) Component 2: Target: 95,000 (disaggregated by gender and marginalized groups).
- Two intermediate indicators regarding training and number of social and environmental sub-projects implemented by CAs were dropped.

As described above, the two restructurings made revisions and adjusted the indicators and their targets as per their definitions. In doing so, this review did not find evidence that the ambition of the project's objectives was lowered. Therefore, this review will not undertake a split rating.

3. Relevance of Objectives

Rationale

Country and sector context. During the period of 2003 and 2014, the State of Bahia experienced some notable progress, particularly compared to broader national trends in Brazil. Bahia's annual GDP growth rate of 4-5 percent outpaced the national average of 3.3 percent. Poverty rates had declined with overall poverty falling from 28 percent in 2007 to 17 percent by 2014, and similarly extreme poverty dropped from 16 percent in 2003 to 10 percent by 2014 (ICR, para 1). Despite these achievements, poverty in rural areas in Bahia was still high at 35 percent. In fact, Bahia accounted for up to 20 percent of Brazil's rural poor (PAD, Annex 6). Family farms that comprised of large number of farmers in the State continued to be subsistence farmers with low productivity, vulnerable to unpredictable weather conditions and were less integrated into the markets. Additionally, rural population in Bahia experienced chronic water scarcity faced by periodic droughts and were under-served by water and sanitation services (WSS) with about 30 percent still lacked any access. More than 90 percent of them did not have access to sewage systems (ICR, para 5).

Government strategy. The PDO was relevant to the strategies of the State and National Government aiming to reduce poverty by improving social and economic inclusion and accessing WSS in rural areas (ICR, para 30). Recognizing the challenges confronted in the rural areas, a transformative shift occurred in Bahia in 2012 which marked a redirection of its strategy and programs, focusing on market-driven investments to integrate family farmers into viable economic value chains. This transition led to targeted approach to building capacity of the rural institutions (i.e., Producer Organizations) for their active engagement and in promoting inclusion of vulnerable populations (women, indigenous peoples, and Quilombola communities) in the value chains. These interventions were aligned both at project appraisal and closing with the Federal Government's policies and programs such as Federal Poverty Reduction Plan 2011 (*Brasil sem Miséria*), the National Program to Strengthen Family Agriculture (PRONAF), the Federal Rural Sanitation Program (*Plano de Saneamento Rural*), the National Program for Agrarian Reform (*Plano Nacional de Reforma Agraria*), the Federal Water for All Program (*Agua para Todos), and t*he GoB's Rural Poverty Reduction Program (*Vida Melhor Rural*) (ICR, para 8).

Bank strategy. The Project Development Objective was well-aligned with the Bank strategy in Brazil. During project appraisal and closing, relevant Bank strategies for the project were: (a) FY12-15 Country Partnership Strategy (CPS); (b) FY18-23 Country Partnership Framework. Under the FY12-15 strategy, the project was aligned to CPS's objective of supporting select States to implement rural development projects, improve access to basic sanitation, and increase resilience to climate change through agriculture development (ICR, para 28). In particular, the project would support the first objective of the CPS focusing on "…boosting growth capacity with job and income generation, especially in Brazil's poorer regions, with a special emphasis in the Northeast". The project's objectives were also in line with the World Bank's Agriculture Action Plan (FY13-15) (PAD, para 11 and 12). At closing, the project's objectives continued to be relevant and supported the Bank's CPF's focus area on "Inclusive and Sustainable Development" that aimed to promote socioeconomic development of family farmers and vulnerable groups through improved technologies to increase productivity and build resilience, increase access to water and sanitation services in low-income communities (ICR, para 29)

Prior Bank experience. The Bank has had a long engagement in Northeast Brazil where the project was located. The programs in the State have evolved from a top-down integrated rural development projects to decentralized Community Driven Development (CDD) programs which are implemented closely with rural communities. Projects prior to the Bahia Sustainable Rural Development Project (known locally as Bahia Productiva) financed sub-projects on areas of basic social infrastructure and paid less attention to productive projects with an objective to increase incomes. Based on the lessons learned from these earlier projects, this project was designed to support farmers generate incomes through interventions such as technical assistance to POs on aggregation, processing, and marketing, promotion of market linkages, adoption of good farming practices and technologies, and investments on water services through bottom-up approach (ICR, para 11).

In summary, the project's objectives were well aligned with the strategies of both the Government and the World Bank. The project activities were relevant in addressing the challenges faced by the State, in particular the high levels of poverty by supporting family farms and helping them to organize as Producer Organizations (POs). Along with aggregation of their production and access to water and sanitation services (WSS), family farms would be better integrated into the market and enabling them to increase their incomes. Thus, the Relevance of this project's objectives to Government and World Bank strategies in Brazil at project's appraisal and closing were rated by this review as High.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To increase market integration and net revenues of organized beneficiaries.

Rationale

Theory of Change. The ICR provided a retrospective Theory of Change (ToC) for the project (Page 5). To achieve the objective of increasing market integration among family farms faced with challenges of low aggregation of their products as well as limited capacity and skills, the project would establish and consolidate Producer Organizations (POs) and Community Associations (CAs). Technical assistance would be provided to develop business plans of market-oriented sub-projects which would be financed through grants. To enhance market integration, partnerships would be developed with market actors, food warehouses would be constructed, and trainings on market-oriented practices would be provided. These activities would lead to beneficiaries organized and better integrated into the markets through contractual arrangements. Such linkages could create market opportunities for their products and support increasing their income.

The underlying assumptions highlighted in the ToC were the following: (a) Family farmers were willing to be organized and open for their capacity to be built; (b) Demand for market-oriented investments are strong; (c) There is demand in the local markets for the food products produced; and (d) TA services provided promote PO demand for adoption of technologies.

As per the ICR (para 34), the project achieved the following key outputs:

Outputs

- Number of market-oriented POs that received financing (Target: 380; Actual 484)
- Number of business and investment plans implemented by POs and CAs (Target: 400; Actual: 700); Female-led POs and CAs (Target: 120; Actual: 239)
- Increase in the yearly sales volume through contracts from POs and CAs (%) (Target: 15; Actual: 132)
- Market-oriented subproject's beneficiaries who received training because of the project (Target: 10,000; Actual: 14,819)
- Beneficiaries who have adopted improved agriculture technology promoted by the project (Target: 7,000; Actual: 7,652); Female (Target: 2,000; Actual: 4,303)
- POs and CAs implementing financial management instruments in subprojects (Target: 400; Actual: 545); Female-led POs and CAs (Target: 120; Actual: 215)
- Market-oriented subproject beneficiaries who received training because of the project (Target: 10,000; Actual: 14,819)
- Direct jobs generated because of project interventions and investments (Target: 1,100; 1,400)
- Construction and TA to Food Distribution Warehouse in Salvador (Actual: 1)
- Number of project beneficiaries (HHs) for subprojects completed (Target: 34,250; Actual: 17,818); female beneficiaries (target: 10,275; Actual; 11,475; vulnerable and marginal people (target: 9,933; achieved: 9,978)

Up until the project closing, a total of 1,169 subprojects had been financed by the project in 326 municipalities. Out of these, 700 subprojects were fully implemented against the revised target of 400 set during the project's first restructuring. Since the project closing and at the time of ICR completion, an additional 162 projects were 90 percent completed, and the Government has assured the Bank that the rest will be fully implemented. While the project was successful in meeting its target, the ICR (Annex 1) points out (and this review agrees) that the target set by the project was low, which should have been adjusted during the second restructuring to make it more ambitious. All other outputs were achieved by the project, except for the one on a total number of project beneficiaries, which was calculated for completed projects only. If subprojects financed and ongoing were considered for 1,169 subprojects, the target would have been achieved (113.2%).

Outcome

- Increase in the total number of formal contracts integrating beneficiary Producer Organizations (POs) to markets (Numbers) (Target 600, Actual: 704; Women led POs, target: 120; Actual: 488)
- Increase in the real net revenue of beneficiary Rural Producer Organizations (Percentage) (Target: 10; Actual: 129; Female beneficiaries, Target: 10; Actual: 171)

Increase in number of formal contracts: As a result of the market-oriented sub-projects financed by the project and implemented by the POs, including trainings and technical assistance, there was an increase in number of formal contracts (704) between POs and markets and the targets (600) were surpassed. Majority of the POs were led by women and their targets were exceeded substantially. The ICR states that this indicator only covered the POs, while the project also supported CAs which were linked to the market opportunities as well.

Increase in real net revenue: This outcome was achieved, and the target was surpassed. As per the ICR (footnote 11), Real Net Revenue (RNV) was measured as total income of the producer organizations, including sales of production, rental of the organizations, including sales of production, rental of the organization's equipment to its members, and corporate contributions, less the payment of taxes. Production costs could not be deducted due to the complexity in gathering accurate data. While this indicator was achieved, this review finds the definition of this indicator to be weak given that the production costs were not incorporated. Based on project monitoring and case studies, the results of the three types of subprojects at a family level were as follows (ICR, table 20):

a. Dynamic Business (subprojects that added value to primary production and market it to public/private buyers): Net Annual Revenue by family increased by 107 percent.
b. Transitioning into markets (sell through informal channels but have already started marketing their products in formal markets mostly through public sector acquisition programs): Net Annual Revenue by family increased by 69 percent.
c. Productive Inclusion (projects aim at selling small quantities of produce in informal markets or at making initial steps towards selling to public sector acquisition programs): Net Annual Revenue by family increased by 360 percent.

These findings were further validated by the results of the Impact Assessment (IE) (2023) which found that revenues of treatment group POs were 20.3% higher than the control group. Further, the treatment group income per capita was 11.2% higher than the control group. For both, the results were not significant and the ICR (para 32) points out (and this review agrees) that the causal links of project investments to outcomes are not definitive. Nonetheless, there were other useful results of the IE such as the benefits of the technical assistance services provided to the POs, increase in direct sales between POs and the market. (ICR, Annex 7).

In summary, the project met its PDO indicators, and the evidence provided in the ICR from the project's monitoring, impact evaluation, and illustrative case studies were found to be credible. However, this review would like to note that for a project that was implemented for 8.5 years, which included an extension and, in a region where the Bank had prior experience, some of the targets for the PDO indicators should have been revised and made more ambitious during project restructurings. Further, at project closing, while all sub-projects financed by the project were under implementation, around 40 percent were not completed. Nonetheless, given the achievements of the project's PDO indicators so far, this review rates the efficacy with which Objective 1 was achieved as Substantial with moderate shortcomings.

Rating
Substantial

OBJECTIVE 2
Objective
To increase food security of organized beneficiaries.

Rationale

Theory of Change. The ICR provided a retrospective Theory of Change (ToC) for the project (Page 5). To achieve the objective of increasing food security among family farms, Producer Organizations (POs) and Community Associations (CAs) would be established. Technical assistance and grants would be provided to develop business plans and finance subprojects in areas of food and nutritional security. Beneficiaries would be provided training and technical assistance on improved agricultural technologies and practices. These activities would lead to their improved access (and stability of access) to food through increased income. The underlying assumptions for this ToC would be the same as that of Objective 1.

The outputs listed for Objective 1 continues to be relevant and there are no separate or additional outputs for assessing this objective. One indicator of relevance is the number of project beneficiaries (HHs) for subprojects completed disaggregated by vulnerable and marginal people (target: 9,933; actual: 9,978)

Outcome

- Increase in average vulnerable beneficiary household dietary diversity indicator (Percentage) (Target: 30; Actual: 14; Female beneficiaries, Target: 30; Actual: 14.3)

The PDO indicator "*increase in average vulnerable beneficiary household dietary diversity indicator*" was defined based on the Brazilian Institute of Geography and Statistics' (IBGE) composite indicator of minimum caloric intake requirements per family (ICR, para 43). The ICR (Para 42) stated that the indicator on dietary diversity was not a relevant indicator for this objective as it did not reflect the project's impact on food security. While all the activities and interventions under Objective are applicable for achieving this objective, specific activities known to promote behavioral changes among beneficiaries such as nutritional education or incentives for diversified diet were not promoted by the project. Nonetheless, the project continued to use this indicator and measured the results through a survey covering beneficiaries of the project during two rounds – prior to subproject implementation and in 2022. The result of the survey found that there was an increase of 14 percent (in comparison to the target of 30 percent) on improvements on diversity of diet. These results confirmed that there was an absence of project activities that were aligned with this indicator (ICR, para 43).

During project implementation, recognizing the limitation of this indicator, the project had started to informally use an additional indicator: Food and nutrition security status of the Project's beneficiaries. The project conducted a survey without a counterfactual (baseline in 2020 and endline in 2022) following the methodology used for national surveys on food security. While food insecurity increased in Bahia and Northeast of Brazil during this time, for project beneficiaries, there were some positive results with an increase in food security levels from 46 percent to 58.2 percent, with a decrease in mild food insecurity. Among the project beneficiaries, moderate and severe food insecurity slightly increased from 14.1 percent to 17 percent, though they were lower than in Northeast of Brazil, where during the same period, households with moderate and severe food insecurity had increased from 32.2 percent to 38.4 percent. The results of the survey could suggest that the project contributed to improved food security. However, even with these results, causal effect between project interventions and the outcome is not conclusive.

In conclusion, the target of the PDO indicator was not achieved. The results of the survey on food security referenced by the document were weak in attributing project activities to outcome. Therefore, this review rates the efficacy with which Objective 2 was achieved as Modest.

Rating

Modest

OBJECTIVE 3

Objective

To improve access to water supply and sanitation services of households in Project areas.

Rationale

Theory of Change. To achieve the objective of improving access to water supply and sanitation services, the project would finance construction and rehabilitation of water supply systems (Centrais) through community mobilization, feasibility studies, engineering design, and grant disbursements for works. The project would install standardized sanitation modules designed for rural households, and fund complementary activities in raising awareness through outreach campaign, trainings, and workshops. The project would also finance training and capacity building to community members on the operation and maintenance of Centrais and promote ownership and responsibility for managing the infrastructure assets. These interventions would lead to improved access to water supply and sanitation services.

Outputs

- Number of direct beneficiaries reached in 59 municipalities in the three regions (Number) (Target: 95,000; Actual: 102,433; Female beneficiaries (Target: 28,500; Actual: 43,124); Vulnerable/marginalized people (Target: 25,650, 52,446)
- Basic WSS investments implemented and sustainably operated (Target: 125; Actual: 175). Sustainable operated systems are defined as WSS systems that had voluntarily adhered to a management plan, and timely payment to management units for the services.
- People trained to improve hygiene behavior/sanitation practices (Target: 10,000; Actual: 37,425); female (Target: 5,000; Actual: 18,748)
- Number of people benefitting from capacity building on management of WSS systems (Target: 250; Actual: 32,169). The team clarified that the targets were significantly exceeded due to change in the approach of providing trainings which shifted from in-person sessions focusing only on individuals responsible for managing the water systems to an online format during COVID-19 restrictions. This adaptation allowed them to expand their outreach to broader range of community members.
- Direct jobs generated from WSS investments (Target: 1,100; Actual: 1,400)
- Number of people benefited from the installation of improved sanitation facilities (Number) (Target: 8,000; Actual: 8,675); Female-led households (%), Target: 15; Actual: 71)
- Number of people benefitting from capacity building on management of WSS systems (Target: 250; Actual: 32,169)
- Direct jobs generated from WSS investments (Target: 1,100; Actual: 1,400)

Outcome

- New piped household water connections resulting from project intervention (Number) (Target: 23,000; Actual: 24,742; Female beneficiaries (%), Target:15; Achieved: 71)
- Water connections recovered (Number) (Target: 5,000; Achieved: 5,297; Female beneficiaries (%) (Target: 15; Achieved: 71)

- Number of people benefited from the installation of improved sanitation facilities (Number) (Target: 8,000; Actual: 8,675); Female-led households (%), Target: 15; Actual: 71)

The key interventions of the project included construction and rehabilitation of water supply systems and sanitation facilities, along with trainings on WSS and on hygiene behavior and sanitation practices. This led to increase in new piped water connections to households and rehabilitation of old systems. In addition to improved access to water, beneficiaries improved their access to sanitation facilities. Additionally, the project created and strengthened new organizations at the community level, such as the Centrais and provided trainings on engineering, procurement, water tariff setting etc.

To assess the results of the project's interventions on WSS, a study was conducted which compared Centrais (which was supported through the project) versus Municipal systems on four areas: a) incidence of diarrhea in children under 2 years of age; (b) infrastructure conditions and operation of the WSS systems; (c) beneficiary community perceptions of the WSS systems; and (d) operational management of the systems (ICR, Annex 7). In comparison to WSS systems managed by the municipalities, the Centrais had a lower incidence of diarrhea (1.39% vs 2.34%) though the differences were not very large. Infrastructure conditions (water supply, storage, catchment etc.) were also found to be in better conditions (Annex 7, Table 2)

In summary, the project successfully met all its PDO Indicators in increasing access to water and sanitation in project areas. The evidence presented regarding these achievements was deemed sufficient, leading this review to rate the efficacy of achieving Objective 3 as Substantial. However, it's worth noting that given the Bank's long engagement in the sector, PDO indicators for this objective, currently focused on outputs, should have been more outcome oriented.

Rating
Substantial

OVERALL EFFICACY

Rationale
In summary, the project successfully achieved its targets for all PDO indicators, except for PDO 2, which measured the food security objective. This PDO was not met due the misalignment of the indicator with the activities that were supported through the project. All intermediate indicator targets were achieved. The evidence provided and reviewed was found to be sufficient. Therefore, the efficacy of achieving the PDO is rated as Substantial, with some moderate shortcomings.

Overall Efficacy Rating

Substantial

5. Efficiency

Ex ante

According to the PAD (Annex 6) an economic and financial analysis was conducted during appraisal based on models built for possible types of subprojects to be financed by the project. As guidance, actual information of similar subprojects implemented by CAR, along with expert advice and secondary data collected were used to construct the model. The following four value chains out of eight identified by a preliminary diagnostic were covered for the cost-benefit analysis with estimation on number of beneficiaries to be reached: sheep/goat, aquaculture and fishing, oilseeds, and solid waste. For WSS, the financial model was based on a water access subprojects financed by a water project in the State. An economic model was also prepared for WSS based on a reference to market prices (PAD, Annex 6, para 28).

Due to the demand-driven nature of both market-oriented (Component 1) and WSS (Component 2) investments, these were representative analysis only and could not be directly compared with the ex-post analysis to be carried out after the project closed. While the benefits of market-oriented investments were revenue generation, the WSS benefits were assumed to be willingness to pay for water expressed by the lowest water tariff charged then by water company supplying water to the capital city in Bahia (PAD, Annex 6, para 27). For Component 1 (Sub-project financing), results of the financial analysis for the value chains were positive in a range of 20%-79%, with an average NPV of R$612,000 and a weighted average for the EIRR of 28 percent. Sensitivity analysis showed that the sub-projects could be financially viable between 12-36 percent reduction in incremental revenue. For Component 2 (WSS), the EIRR was estimated to be 39 percent and NPV at R$556,470, or R$5,565 per family (PAD, Annex 6, para 32).

Ex Post

At project closing, an EFA was conducted based on project's monitoring data and the 24 illustrative case studies of subprojects that were completed by the final evaluation reported in the Borrower Completion report (Annex 5). Due to the broad nature of the selection criteria of business plans/sub-projects supported to Producer Organizations with varying degrees of technical and management capacities, and the differences in the time frames of projects completed, the ICR (Annex 4, para 6) stated that it was not possible to clearly define and assess the investments. Hence, like PAD, the ex-post financial analysis was based on cost-benefit analysis of illustrative cases to estimate the financial viability of the activities supported. As per the communication with project team, IEG was informed that the case studies were selected by ensuring that the main subsectors financed by the project were represented and were proportional to the investment made by the project in each subsector. For the economic analysis, the annual investment costs were broken by sub-sector and the typologies of POs supported – dynamic, in transition and productive inclusion. Based on project's monitoring data, average revenues were estimated for each of the sub-sectors and typology (ICR, Annex 4, para 55).

For WSS, the methodology deviated from the ex-ante analysis which had used 'willingness to pay' measure indicating that it was difficult to estimate the incremental volume of water received in a project where many beneficiaries were poor. Instead, the project used a different proxy which was the 'water tariff applied to a middle-class family' by the State of Bahia Water Supply Company (EMBASA) which was a conservative proxy as water charges of EMBASA are lower than in other regions or countries with higher income (para 58).

The results of the financial analysis based on the illustrative cases were mixed with some value chains (e.g., beekeeping and honey processing, dairy and milk production) more successful than others (e.g., vegetable garden, cassava). In some cases, these results did not align with the data from monitoring. On the other hand, the economic analysis conducted yielded positive results for both Component 1 and 2, with EIRR amounting to

23 percent and 34-42 percent, respectively (compared to the results of the ex-ante EFA with ERR of 28 percent and 39 percent), The project's overall EIRR was 14 percent with an NPV of R$566 million at 2023 prices with a discount rate of 6 percent. The ex-ante EFA did not calculate an overall EIRR.

Administrative and Institutional Efficiency: The project was implemented over an 8.5-year period and included two restructurings. The project faced implementation challenges during the early stages of the project due to weak preparation (described under quality at entry). In addition, the project and its activities were affected by COVID-19 pandemic's restrictive measures (ICR, para 83). This led to a 21-month extension of the project's original closing date. According to the ICR (Annex 4), an additional analysis was done to assess whether the project's economic returns would have been higher if it closed within the planned five years, The analysis found that if the project closed on time, its EIRR would have been 15 percent, only 1 percent higher.

In conclusion, despite the implementation delays, the EIRR (23 percent for Component 1 and 34-42 percent for Component 2) with an overall project IRR of 14 percent with an NPV of R$566 million at the end of the project, justify a rating of Substantial for Efficiency.

Efficiency Rating

Substantial

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

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 ☐ Not Applicable
ICR Estimate	✓	14.00	0 ☐ Not Applicable

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

6. Outcome

The project's objectives were well aligned with both the Government and World Bank strategies and were relevant throughout the project period. The project supported activities that addressed key development challenges faced by family farmers in rural Bahia therefore the Relevance of Objectives for this project was rated high. The project met the targets for four out of five PDO indicators and all intermediate indicators. The project's M&E had some challenges which required revisions of Results Framework during restructuring, though some of the weaknesses such as the appropriateness of indicator and revisions of targets were still not addressed by the project. Yet, achievements on evidence provided through project's monitoring and impact assessment were useful and credible. Thus, the Efficacy rating was Substantial with moderate shortcomings. The project achieved an ERR of 14 percent and once all subprojects are completed, the return on investment could be higher. In summary, given some of the shortcomings on efficacy, this review concludes that the project's overall outcome is Moderately Satisfactory.

a. Outcome Rating

Moderately Satisfactory

7. Risk to Development Outcome

The ICR (Section D) discussed the following risks that may impact the development outcome:

Institutional risk (POs/Centrais). The two types of institutional risks highlighted in the document focused on POs and the Centrais. The POs that were created and supported through the project had to make a shift in developing and implementing sub-projects that were marketable. Given that this approach is relatively new for many of the POs, there can be risk that they may not always be successful in accessing markets. For POs to succeed, ongoing support through TA and business development services are needed to make them sustainable. Further, the water supply and sanitation activities supported through the project have been implemented through the agency (i.e., Centrais) which is still new and has limited technical and managerial capacity. There is also limited financial resources for O&M of the WSS infrastructures due to unwillingness for users to pay or limited revenue collection. Continued support is needed which is planned through a new World Bank supported project for Bahia.

Public policies risk. The policy environment in the region has historically supported project beneficiaries through public food procurement programs and concessional credit initiatives. These avenues have served as important pathways for Producer Organizations (POs), those that are in nascent stages, to better integrate into the market. However, such programs have been impacted by recent budget cuts. Additionally, insufficient public infrastructure, such as rural roads and ICT networks, can escalate production and transaction costs, potentially undermining the competitiveness of POs against large-scale farms that operate in the region without such support. Consequently, for POs in early stages of development, the absence of public support programs could pose some risks.

While the ICR did not emphasize it, the executive summary of the Borrower’s Completion Report (Annex 5) acknowledged climatic events as a potential risk to development outcomes. The region has experienced an increase in extreme events like droughts and heavy rains in recent years. Nevertheless, the project has included training sessions on adaptive technologies and sustainable natural resource management measures, crucial for enhancing resilience to climate change.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project was relevant in addressing the challenges faced by family farmers in Bahia by supporting them with market-driven investments to facilitate market access and enhance income. The project was designed based on Bank’s long engagement in Northeast Brazil, particularly in Bahia where the Bank had prior experience supporting demand driven CDD projects.

While these prior experiences were valuable, the project's focus on supporting market-driven investments was a new approach. This necessitated significant upstream efforts, which, as noted in the ICR (para 103), were not entirely completed and was a key weakness of project preparation and appraisal. Consequently, the project encountered delays in implementing activities, such as the Call of Proposals for business plan preparations which affected the subsequent activities of the project such as financing and completing sub-projects.

On fiduciary aspects related to procurement and financial management, capacity assessments were done during project preparations and action plans/trainings were designed. But even with these efforts, the project later faced challenges due to POs weak procurement capacity that led to delays in the initial years (ICR, para 103).

Additionally, for water sector activities, institutional arrangement was not in place at project appraisal. Following project approval, a new entity (CERB) was established which incurred delays in assembling the necessary technical team.

The ICR identifies, and this review concurs, gaps in the M&E system and the Results Framework that was built during appraisal. Limited attention was given in designing a system that would capture the various activities that contribute to the project's objectives. Many of the indicators had to undergo revisions during the first restructuring due to measurement errors and required modifications on institutional arrangements (ICR, para 103) (Discussed more in detail under Section 9). Further, the ICR points out that the project's implementation readiness was overstated (ICR, para 79). Procedures for financing business plans, such as beneficiary selection, agreement documentation, and community procurement, were not ready at appraisal, which led to implementation delays later.

This review concludes that Quality at entry was Moderately Unsatisfactory with significant shortcomings.

Quality-at-Entry Rating
Moderately Unsatisfactory

b. Quality of supervision
During implementation, Bank conducted 17 implementation missions which consisted of teams with relevant technical expertise. The ICR (para 104) states that the Bank's close and continuous engagement with the client helped to get the required buy-in and support from clients on the new approach of the project. They were receptive to advice on improvements on processes such as the Call for Proposals to improve and refine project targeting, and in facilitating dialogues between the different implementing agencies. From the Bank's side, there was continuity with the same TTL in the design phase and for the most part of project implementation (ICR, para 82).

The Bank played an instrumental role in supporting fiduciary functions such as on procurement. During the project period, the POs had difficulty in preparing procurement documents and due to the dispersed nature of project activities funded, Government audits were a challenge. To address this problem and to improve and manage the procurement processes for the POs, Bank provided trainings and collaborated with CAR in developing an online bidding solution (*Solução Online de Licitação* - SOL) that streamlined procurement which helped improve transparency and governance (ICR, para 71).

Over the project period, the Bank conducted two restructurings which revised the Results Framework. However, according to the ICR (para 104), one of the PDO indicators (“Increase in average vulnerable beneficiary household dietary diversity”), could have been revised to better align with project activities. The ICR also points out the Bank could have been more proactive in providing technical support on M&E.

With the subprojects that were not completed, the Bank has agreed with the Government for guaranteed completion following project closing. During ICR preparation, the Bank was pleased to see a lot of progress (ICR, para 105)

The project’s implementation period undertook important restructurings that tried to address implementation challenges. The Bank had a close engagement with the clients through the dialogue led by one TTL who managed the project from preparation to one year before closing. This review therefore concludes the Quality of supervision to be Moderately Satisfactory, with minor shortcomings.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design
Given that a Theory of Change (ToC) was not required at the appraisal stage, the ICR (Page 5) prepared a retrospective ToC which presented the causal relation between development problem the project aimed to address, and the planned project interventions, its outputs, short to medium outcomes, and higher-level long-term outcomes.

The Results Framework at appraisal consisted of 5 PDO level indicators (all disaggregated by gender), and 24 intermediate-level indicators. During the project’s restructurings, one PDO indicator was dropped and substituted by a new indicator and several revisions were made to intermediate outcome indicators and targets. As indicated earlier in the review, the RF prepared at appraisal had significant gaps. Some of the Project Development Objective aspects did not have relevant measurements and activities (for example on food security described below).

According to the ICR (Para 35), to assess the objective of market integration of family farmers, the RF included a PDO indicator 1 *“Increase in the total number of formal contracts integrating beneficiary Producer Organizations (POs) into markets”*. Given the informality that existed in the project areas where many spot-market transactions occurred, not all transactions were formalized through contracts. Additionally, the other gap highlighted was about the use of the PDO indicator 3 *“Increase in average vulnerable beneficiary household dietary diversity”* to assess the objective of increased food security. As per the ICR (para 42), this indicator was unable to assess the project's impact on food security given that the project's interventions were on improving beneficiaries' access to food through increased income from improved market integration. Critical activities such as nutritional education and trainings for diversified diets were not offered by the project.

Finally, more time and effort were required in designing an M&E system for the project. During appraisal, the project aimed to use the system of an earlier project (i,e., Produzir II) but due to the new approach followed in this project, a new platform had to be developed which impacted monitoring of activities during the earlier stage of the project.

b. M&E Implementation

The project's M&E system faced challenges during implementation. As per the ICR (para 88), weak design and the project staff's lack of experience and technical knowledge led to delays in reporting indicators. Following the downgrade of the project's M&E, CAR put effort into developing a Web system that tracked beneficiary data from the project areas. There was also another system named the Contracts and Training System (SACC), which helped monitor financial performance indicators.

As per the ICR, over time, the project's capacity improved. New tools were developed on a pilot basis to assess and review business plans and the performance of POs. One key effort on M&E was that the project successfully pursued in conducting a randomized impact evaluation.

Despite these efforts, certain indicators (described in the earlier sector) did not adequately capture project's benefits. While it would have been necessary to revise some of the indicators (PDO indicator regarding food security), the two restructurings mainly focused on revising intermediate outcome indicators and targets. Some of the activities on institutional development such as the strengthening of the Centrais that the project supported did not have any indicators (ICR, para 89).

c. M&E Utilization

Given the challenges of M&E system design, the project team had to depend on MS Excel files to monitor progress. Over the course of the project, new systems were developed but periodically they faced with operational and technical difficulties. Hence, M&E could not always be fully used to assess achievement of the project.

Further, the systems were not fully integrated between the various activities supported through the project which made monitoring of project activities cumbersome and challenging. As a result, the project had to rely on the Impact evaluation and illustrative case studies as key tools for measuring impacts at project end.

In summary, given all the challenges faced by the project on M&E with limited improvements over the project period, this review rates M&E to be Modest.

M&E Quality Rating
Modest

10. Other Issues

a. Safeguards

Environmental safeguards. The project was categorized as Environmental Category B and as per the PAD (para 52), the following safeguards were triggered: Environmental Assessment (OP/BP 4.01), Forests (OP/BP 4.36), Natural Habitats (OP/BP 4.04), Pest Management (OP 4.09) and Physical Cultural Resources (OP/BP 4.11). Additionally, the Safety of Dams (OP/BP 4.37) policy was also triggered as the Project may finance small dams, including farm ponds, local silt retention dams, and low embankment. The ICR (para 96) states that during project implementation, there were no negative environmental impacts observed. In fact, some of the activities the project financed included social and environmental grants on climate smart agriculture and agronomic practices and promoted positive environmental impacts. During project implementation, safeguard compliance was regularly monitored by the Bank team and no major issues on environmental management had to be dealt with. From the project's side, CAR's Technical Commission for Environmental Assurance (CTGA) assessed the projects and validated that their implementation was according to the Environmental and Social Management Framework (ESMF) developed by the project. On water investments, CERB monitored and verified environmental requirements which were complied.

Social safeguards. As per the PAD (Para 52), the following safeguards were triggered: OP/BP 4.10 (Indigenous Peoples) and OP/BP 4.12 (Involuntary Resettlement). During appraisal, a Resettlement Policy Framework (RPF) was prepared based on consultation with beneficiaries. The project did not face non-compliance to any of its social safeguard policies. The project benefited the vulnerable including indigenous households in the project areas. As per the ICR (para 98), one of the Call for Proposals during the Pandemic on Food and Nutrition Security targeted the most vulnerable populations affected by the pandemic. This Call for Proposals benefited 6,217 households with a total financing amount of US$3 million.

The ICR also noted that the project Grievance Redress Mechanism (GRM) worked well. Project beneficiaries were connected through project websites, social media – Twitter account, Instagram, and Facebook pages. An ombudsman service was accessible online. Over the course of the project, there were 281 requests processed (ICR, para 99).

b. Fiduciary Compliance

Financial Management. At project appraisal, a financial management capacity assessment was conducted of the main implementing agency (CAR) and was deemed satisfactory. According to the PAD (para 47), the FM system to be used by the project was developed during the earlier project. Yet, the project's financial assessment identified moderate risks for the new project's FM given that the project was implemented on a decentralized structure with financial resources to be managed at PO and CA level. The assessment also highlighted the need to have a FM system with clear procedures and adequate controls to monitor and oversea fund flows and reporting (ICR, para 101). Under Component 3, FM technical assistance to support the FM processes were planned. Despite these efforts, the project did face FM challenges resulting from delayed reporting of subproject expenditures. As a result, the financial management ratings of the project varied during implementation. To address these problems, the project introduced a new electronic system in 2019 and additional staff accountants were hired which helped improve FM quality and expenditure reporting. All financial audit reports were received with unqualified audit opinions. FM was rated as Satisfactory at the project closing.

Procurement. Procurement Assessment done at appraisal had found that despite CAR staff's long experience with Bank-financed operations, the nature of the decentralized activities of the projects whereby POs were responsible for community level contracting would challenge CAR staff's procurement capacity (PAD, para 49). The PAD highlighted the need to strengthen the capacity of the implementing agency and its staff, by hiring consultants and technical experts to ensure that the plans submitted have used correct procurement methods. According to the ICR (para 102), during project implementation, procurement risk rating was substantial due to the difficulties POs faced with procurement activities. Small scale subprojects did not attract the interest of the private sector and POs had difficulty in using the shopping methods to obtain three price quotes. Over time, some of the processes such as SOL *(Soluções Online para Licitações)* procurement application that was launched in July 2019 assisted with subproject procurement improved procurement compliance which was rated as Highly Satisfactory at project closing.

c. Unintended impacts (Positive or Negative)

None

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	Modest	
Quality of ICR	---	Substantial	

12. Lessons

The ICR included five lessons, out of which this review has highlighted with some adaptation in language the following three lessons that has broader applicability.

It is important to recognize that not all family farmers have the potential to participate in market integration. In such instances, grant financing could support collaborations between mature and less mature institutions (e.g., POs). Project experience showed that more mature POs had higher revenues. On the other hand, small-scale, less organized, and newer POs had difficulty selling their products and integrating into markets. In such circumstances, Call for Proposals and Business Plans should be open in seeking applications from a collaboration between mature and weaker POs, enabling the weaker POs to gain knowledge and benefit from the experience of the more experienced POs.

In Productive Alliance type of projects, developing partnerships with key research and extension agencies, and providers of financial services can enhance POs growth and promote innovations. Research and extension agencies play important roles in technology generation and adoption. POs should tap their services, to be complemented by linking to providers of financial services and technical assistance. Such linkages can be essential in sustaining the growth of POs.

Productive Alliance type of projects require strong M&E design with appropriate technical staff that have adequate knowledge of productive and market activities in a particular sector. For PA projects, project preparation should include design of a strong M&E system consisting of a combination of staff who have quantitative, technical and extension skills. Ex-ante preparation would allow such projects to effectively design early project activities such as Call for Proposals which will create the platform for smoother project implementation. In this project, given that there were weaknesses of quality at entry, particularly with the M&E system, the project faced considerable delays during the early stages.

13. Assessment Recommended?

Yes

Please Explain

Yes, the Bank has had a long engagement in the State of Bahia by supporting CDD type of projects. Prior to this project, most of the sub-projects financed were social and environmental projects. A new approach of financing productive investments was introduced under this project. At project closing, most of the subprojects financed were recently closed, and around 40 percent of projects were still under implementation. An impact assessment is planned to be conducted once all sub-projects are completed. After a few years, it may be worthwhile to undertake an assessment of the results and the sustainability of the sub-projects financed by the project.

14. Comments on Quality of ICR

The ICR provided useful insights into project implementation. The changes to the RF during the two restructurings were clearly highlighted in Annex 1C. In an absence of a well-functioning M&E system, the document presented results of the impact evaluation and examples from illustrative case studies as evidence in meeting project's objectives.

The ToC made a clear causal link between project activities, outputs and PDO outcomes, and the Results Framework was adequately supplemented with details on outputs which were listed in Annex 1. The report was candid and highlighted shortcomings about the project's design and implementation in the relevant sections. However, there were some discrepancies in the document, including in reporting indicator targets.

Overall, the Quality of the ICR is rated Substantial with minor shortcomings.

a. Quality of ICR Rating
Substantial