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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 19-Apr-2024 | Report No: PIDIA00698

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Brazil	LATIN AMERICA AND CARIBBEAN	P180429	Bahia Sustainable Rural Development Project
Financing Instrument	**Estimated Appraisal Date**	**Estimated Approval Date**	**Practice Area (Lead)**
Investment Project Financing (IPF)	23-Apr-2024	12-Aug-2024	Agriculture and Food
Borrower(s)	**Implementing Agency**		
Government of the State of Bahia	CAR - Companhia de Desenvolvimento e Acao Regional		

Proposed Development Objective(s)

To increase market access, agricultural productivity and develop resilience of family farmers to shocks while expanding access to resilient water services in selected rural areas.

Components

Component 1: Increasing agricultural productivity, access to markets, and resilience to shocks
Component 4: Contingent Emergency Response Component (CERC)
Component 2: Water supply for rural communities.
Component 3: Designing and Scaling Innovative Solutions.
Component 5: Project Management

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	Yes
Is this project Private Capital Enabling (PCE)?	No

SUMMARY

Total Operation Cost	**160.16**
Total Financing	**160.16**
of which IBRD/IDA	**100.00**

Financing Gap	**0.00**

DETAILS

World Bank Group Financing	
International Bank for Reconstruction and Development (IBRD)	100.00
Non-World Bank Group Financing	
Counterpart Funding	60.16
Borrower/Recipient	50.00
Local Communities	10.16

Environmental And Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Recent economic development has been characterized by a mix of positive and negative trends**. Between 2001 and 2014, Brazil experienced growth averaging 3.3 percent annually in real terms. This growth was propelled by favorable commodity prices, capital flows, and sound macroeconomic management, enabling the financing of important social protection programs and helping lift over 27 million people out of poverty. However, by 2014, a combination of falling commodity prices, political instability, and unaddressed structural challenges had plunged the economy into a recession. From 2014 to 2019, real Gross Domestic Product (GDP) growth averaged -0.3 percent. In 2020, the COVID-19 pandemic caused a decline in the GDP growth of -3.3 percent. By 2021, the unemployment rate jumped to 14 percent.

2. **Following a rebound from the COVID-19 pandemic, economic growth slowed down**. In 2021, the post-COVID-19 recovery begun with a rebound in economic growth of 5 percent. This surge was fueled by fiscal stimulus, a successful COVID-19 vaccination, favorable conditions in commodity markets, and high demand for services. From 2022 to 2023, growth moderated to 3 percent, which was primarily attributed to expansion in agriculture, exports, and fiscal transfers to low-income households. Projections indicate a further decline in economic growth to 2 percent over the next five years. Meanwhile, inflation peaked at 12 percent year-over-year in 2022 driven by high energy and food prices and a robust domestic economy. The implementation of a monetary policy resulted in a decline in inflation to 3.9 percent in 2023.

3. **Brazil will experience rapid change in climate conditions and its impacts will be spatially varied**. By the end of the century, the average temperature in Brazil is expected to rise, depending on the trajectory of global GHG emissions, by

1.7 °C to 5.3 °C from the 1986–2005 average[1]. All of Brazil's biomes are vulnerable to the impact of changes in temperature and rainfall, though with significant regional differences[2]. In rural areas, more frequent and severe climate events such as droughts and floods are likely to cause major impacts on agriculture productivity, logistics (lowering conditions of rural roads) and delivery of water and sanitation services due to dwindling water supply.

Sectoral and Institutional Context

4. **The agricultural sector is highly heterogenous.** There are nearly 5 million rural properties distributed over 65 million of hectares of land**.** Nearly, 3.9 million rural properties are classified as family farms[3, 4, 5]. They represent 77 percent of all rural properties in Brazil. Family farmers, often, work on less than 100 hectares each. The Northeast region holds the highest concentration of family farmers, accounting for 47 percent of all family farms in Brazil. The South region comes in second place with 18 percent followed by the Southeast region with 17 percent. The North region accounts for 12 percent and the Center-West region account for 5 percent of all family farmers in Brazil. These family farmers co-exist with 1.1 million small, medium, and large-scale commercial farmers. Family farmers exhibit significant diversity, some are highly productive and commercially oriented, embracing technological innovations[6]. In contrast, others follow subsistence-oriented farming practices, lacking access to markets and relying on traditional farming methods.

5. **The agrifood sector plays an important role in the national economy and livelihoods of the poor.** The primary agriculture sector accounts for 5 percent of the national GDP, nearly USD 175 billion. Considering the back and forward linkages along the entire agrifood system ranging from input providers, farmers, agribusiness firms and distributors, its contribution to the national economy reaches 26 percent of GDP. The primary agricultural sector employs 15 million people, accounting for 20 percent of the national workforce. Brazil is now a top-5 producer of 34 agricultural commodities, and it is the largest net agrifood exporter in the world. Half of its agrifood production, USD 123.2 billion, is sold in international markets. The agrifood exports represent 37 percent of Brazil's total exports. Overall, Brazil's agrifood sector has performed well on aggregate. It is estimated that 1 percent of the rural properties, mostly medium and large-scale farms, generate 50 percent of the gross agricultural value of production[7]. While many family farmers struggle to make ends meet, rural poverty is estimated to be at 38.7%, which is more than twice the urban poverty rate[8].

6. **The agrifood sector witnessed an annual growth rate of 2.03 percent in TFP from 1970 to 2017**[9]. The Center-**West** region demonstrated the most impressive performance, with an annual agricultural TFP growth of 3.9 percent. The South and Southeast regions also experienced significant growth, at 2.43 percent and 1.91 percent respectively. However, the North and Northeast regions witnessed a decline in agricultural TFP growth rates during the more recent period between 2006 and 2017. This high TFP growth overall was achieved through investments in: (i) agricultural innovation (i.e. research and development, agricultural extension and technical assistance); (ii) agriculture finance (i.e. credit and insurance); (iii) infrastructure; and (iv) agricultural trade liberalization. Small-to-mid size farmers (20-200 hectares) and those in the North

[1]World Bank. 2021. "Climate Risk Country Profile: Brazil." Washington, DC: World Bank Group.
[2] Painel Brasileiro de Mudanças Climáticas (PBMC). 2013. "Executive Summary." In Impactos, Vulnerabilidades e Adaptação: Contribuição do Grupo de Trabalho 2 ao Primeiro Relatório de Avaliação Nacional do Painel Brasileiro de Mudanças Climáticas edited by E.D. Assad and A.R. Magalhães. Rio de Janeiro: Universidade Federal do Rio de Janeiro.
[3] Instituto Brasileiro de Geografia e Estatística. 2017. Censo Agropecuário. Rio de Janeiro.
[4] Law No. 11.326 defines family farmers as: owning land under 4 fiscal modules, family performing most of farm work, significant income come from farm activities, farm must be managed by the owner family, and total annual household income below R$ 360,000.
[5] Fiscal module defines the minimum land size per municipality needed for a family farm to succeed, considering subsistence, social progress, and full dedication to agriculture. This area ranges from 5 to 110 hectares.
[6] Schwab, K. 2016. The fourth industrial revolution. World Economic Forum.
[7] Souza, G., et al. 2018. Imperfeições de mercado e concentração de renda na produção agrícola. Revista de Política Agrícola, ano 27, n. 2, p. 31-38.
[8] Instituto Brasileiro de Geografia e Estatistica (IBGE). 2023. Síntese dos indicadores sociais (SIS).
[9] Gasques, J.G. et al. 2020. Crescimento e produtividade da agricultura brasileira: uma análise do censo agropecuário," in José Eustáquio Ribeiro Vieira Filho and José Garcia Gasques, eds., Uma jornada pelos contrastes do Brasil. Cem anos de Censo Agropecuário. IPEA. Rio de Janeiro, Brasil.

and Northeast of Brazil have recorded the lowest TFP growth through this period. Despite the country's overall improvement in competitiveness, certain regions (i.e. North and Northeast) and specific farmers segments lag behind. Prioritizing agricultural TFP improvements in lagging regions and farmer segments is a priority for Brazil to unlock sectoral further economic growth, while reducing poverty and inequality.

7. **Factors that weigh on Brazil's future agrifood potential.** Despite the recent growth and future potential of the agrifood sector in Brazil, there are several challenges to be overcome.

8. **Challenge #1 – Delivery of last-mile agricultural public goods and services**. The literature shows that agricultural public goods like rural infrastructure (rural roads, electrification, irrigation, etc) and services (land administration, food safety and agriculture health, agriculture innovation, etc) are fundamental for addressing food security and sustainable development[10, 11]. Brazil invests only 1 percent of its agricultural GDP on agricultural public goods and services compared to the OECD average of 3.4 percent [12]. As a result, few farmers benefit from them (i.e. 20 percent of farmers benefit from agricultural extension services) and 63 percent of the rural population has experienced food insecurity. This low coverage is compounded by the poor-quality of public goods and services provided[13]. Roads are another example of the challenges of delivering such agricultural public goods in rural areas. In Brazil, roads are essential to moving over 305 million tons of agricultural output between farms and markets annually. Rural roads near agriculture production areas are often unpaved and in poor condition[14], leading to high transport cost for inputs and outputs[15]. This problem is significant for family famres located in remote areas. Furthermore, the provision of water supply services is also deficient in Brazil, as acknowledged by the National Program for Rural Water Supply and Sanitation approved in 2019.

9. **Challenge #2 - Building assets for an inclusive agrifood system.** Most family farmers struggle with poverty with household incomes falling below USD 1.24 daily threshold. This struggle can be attributed, in part, to the lack of minimum assets endowment. The current literature underscores the crucial role of land administration efforts to secure land tenure and empowering family farmers[16] and highlights the significance of minimum asset ownership for production[17]. Also, recent research provides compelling evidence for the effectiveness of supporting rural households through various productive inclusion phases using a multifaceted "graduation approach[18]" and "productive alliances"[19] programs[20]. These approaches and programs, combining productive asset transfers, technical and business administration assistance, and access to saving accounts, have demonstrably led to long-term sustained increases in income and consumption for participating family farmers.

[10] Atkin, David, and Dave Donaldson. 2015. "Who's Getting Globalized? The Size and Implications of IntraNational Trade Costs." NBER Working Paper.
[11] Porteous, Obie. 2019. "High Trade Costs and Their Consequences: An Estimated Dynamic Model of African Agricultural Storage and Trade." American Economic Journal: Applied Economics 11 (4): 327–66.
[12] Organization for Economic Development (OECD). 2023. Agricultural Policy Monitoring and Evaluation 2023. Adapting Agriculture to Climate Change.
[13] Davis, K., S. C. Babu, and C. Ragasa. 2020. Agricultural Extension: Global Status and Performance in Selected Countries. Washington, DC: International Food Policy Research Institute.
[14] Vieira Filho, José Eustáquio Ribeiro Organizador et al. 2019. Diagnóstico e desafios da agricultura brasileira. Rio de Janeiro: IPEA, 2019.
[15] Brazil ranks 74th on the Road Connectivity Index and 51st logistics performance (LPI). it is lagging peers in the quantity and quality of its infrastructure. By comparison China's rank is 19th and India's 38th on LPI.
[16] Deininger, Klaus. 2003. Land policies for growth and poverty reduction. The World Bank Publications.
[17] Eswaran, Mukesh, and Ashok Kotwal. 1986. "Access to Capital and Agrarian Production Organization." The Economic Journal 96(382): 482-98.
[18] The Bangladeshi organization BRAC (www.brac.net) designed a livelihood program known as the "Graduation approach. This program provides ultra-poor households with a productive asset, training, coaching, access to savings, and consumption support to help them graduate from extreme poverty. The program has been replicated in many countries and rigorously evaluated.
[19] Productive Alliances are business partnerships among the following partners: (i) technical (either private or public), commercial (wholesalers, processors, and/or retailers), and financial (banks) along with producers organizations (POs) designed to strengthen the position of family farmers within agricultural value chains.
[20] Abhijit Banerjee, Dean Karlan, Robert Osei, Hannah Trachtman, Christopher Udry. 2022. Unpacking a multi-faceted program to build sustainable income for the very poor, Journal of Development Economics, Volume 155

10. **Challenge # 3 – Improving agrifood system sustainability.** Brazil's agrifood sector accounts for more than one third of total national GHG emissions. When combined with land-use change and forestry, the agrifood sector's contribution reaches 60 percent of the national GHG emissions[21]. In addition, the use of outdated farm technologies and farming practices leads to soil degradation and water pollution. In 2019, Brazil was the fourth largest global consumer of fertilizers. Overuse of fertilizer is associated with leaching of nitrates into groundwater, emission of nitrogen oxides, pollution of soil with toxic heavy metals, and surface runoff of nitrogen and phosphorus. Furthermore, family farmers are highly exposed to extreme weather events (i.e. high spatial and temporal rainfall variability), which combined with low asset's endowment and income levels, make them highly vulnerable to climate change. To address the issue, a simultaneous approach is recommended: (i) implementing environmental policies to halt agricultural frontier expansion (i.e. turning unassigned public lands into protected areas, improving the implementation of the rural environmental cadaster– CAR) and (ii) promoting agriculture intensification of family farmers through the adoption of climate-smart agriculture (CSA) technologies and farming practices.

11. **Challenge #4 - Agrifinancing for sustainable agrifood sector development**. Returns from investing in agrifood production can be highly uncertain because of significant variations in natural conditions and volatility in agrifood markets. Availability of credit heavily influences agrifood (i.e. crop and livestock selection, type of production technologies and practices, etc). The Brazil's agrifinance market relies, USD 228.5 billion credit market in 2023/24, is dominated by the private sector, providing 67 percent of total credit (USD 154 billion). The public sector remains a significant contributor, at 33 percent (USD 75 billion from *Plano Safra*). Despite the use of preferential credit schemes as the key agriculture public support policy, only 15 percent of family farmers access credit lines, indicating a pressing need for improved agrifinance accessibility to family farmers[22]. Furthermore, the current available agrifinance instruments could be strengthened to provide incentives for the adoption of CSA practices and technologies, contributing towards improvement in agrifood productivity, environmental goals, and improved livelihoods.

12. **Challenge # 5 –Enhancing women participation on agrifood system development.** Despite comprising over 32 percent of Brazil's farmers, women face marginalization within the agrifood sector. Sociocultural norms limit their access to essential resources such as land, water, financing, inputs, and innovation services[23]. Furthermore, women disproportionately bear the burden of unpaid domestic and caregiving responsibilities. They spend 2.3 times as much time on unpaid domestic and caregiving work than men[24]. Moreover, women's leadership within farmers' organizations, such as cooperatives and community associations, remain underrepresented[25]. Recent findings indicate that female-owned properties are 61 percent less productive[26], on average, than male-owned ones[27]. Female farmers yields are 20-30 percent smaller than those of male farmers[28]. Additionally, agricultural commercialization is lower when farmers' organizations are led by women, as compared to those led by men[29]. Addressing these gender inequalities in the agrifood system of Brazil could improve yields, incomes, and food security.

13. **The Plano Pluriannual (PPA) for 2024-2027 was approved by Congress in 2023 and it is being implemented.** The PPA 2024-27 has three pillars: (i) Social Development and Guarantee of Rights; (ii) Economic Development and Socio-

[21] According to SEEG, in 2022, Brazil's net GHG emissions were of 1.688 GtCO2e. Agriculture and livestock emitted a net 617 MtCO2e (or 36 percent of total net GHG emissions), while land-use change and forest sector emitted 489 MtCO2e.
[22] Souza, Priscila and Amanda Albuquerque. 2023. Family Farming in Brazil: Inequalities in Credit Access. Rio de Janeiro: Climate Policy Initiative, 2023.
[23] Only 20 percent of women have access to land within the family agriculture segment. Additionally, only 12 percent of women obtain technical assistance (Censo Agropecuário – IBGE, 2017).
[24] World Bank Gender Data Portal. 2023. Brazil Country Profile.
[25] Women participation in associative activities is only 5.3 percent, while 12.8 percent two men participate in some type of association. (Censo Agropecuário – IBGE, 2017).
[26] Female-owned properties as less capital-intensive, relying on fewer modern inputs, hiring fewer workers, and having limited credit access compared to male-owned properties.
[27] Araujo, R. et al. 2024. Seeds of Disparity: The Gender Land Divide from Brazil's Agricultural Transition (No. dk4bc). Center for Open Science.
[28] Northern Michigan University, 2021. https://nmu.edu/gender/sites/gender/files/2021-01/Martz-GC.GN495-Zine.pdf
[29] In Brazil, farmers sell, on average, 60 percent of their output. Among women led farmers, they only sell 46 percent of their outputs.

Environmental and Climate Sustainability; and (iii) Defense of Democracy and Reconstruction of the State and Sovereignty. It also proposes five cross-cutting agendas: women, indigenous people, racial equality, children and adolescents, and green action. It involves renewed emphasis on themes present under President Lula's 2003-10 administrations, new programs (e.g. the Ecological Transformation Plan-ETP) and more ambitious versions of earlier initiatives, such as: (i) the third Growth Acceleration Program (PAC) with USD 350 billion in infrastructure-related investments; (ii) the fifth Action Plan for Deforestation Prevention and Control in the Legal Amazon and Cerrado (PPCDAm and PPCerrado) to support the control of deforestation; (iii) National Programme for the Conversion of Degraded Pastures into Sustainable Agricultural, Livestock and Forestry Production Systems (iv) a bolder *Plano Safra*, with more than US$ 70 billion in credit lines for farmers and a stronger focus on climate mitigation, (iv) a new industrial policy, with USD 60 billion of financing until 2026; and (v) the ABC+ Plan aiming to promote adaptation to climate change and reduce GHG emissions.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

14. To increase market access, agricultural productivity and develop resilience of family farmers to shocks while expanding access to resilient water services in selected rural areas.

Key Results

a) Increase the adoption of improved varieties, breeds or tress, and management practices that are climate-environmentally friendly by POs and farmers supported by the project.

b) Increase sales of agricultural and food products from the POs supported by the project.

c) Increase in income of family farmers supported by the project (social inclusion).

d) Reduce the gender gap in revenue from sales between female-led and male-led POs.

e) Increase water availability and security in rural areas.

D. Project Description

Project Development Objective

(i) PDO Statement

15. To increase market access, agricultural productivity and develop resilience of family farmers to shocks while expanding access to resilient water services in selected rural areas.

(ii) PDO Level Indicators

PDOs	Unit	PDO-Indicator
PDO #1. Increase access to markets, agricultural productivity, and climate change resilience of family farmers	Percentage	i. Market Access: Increase in the sales of Producer Organizations (POs) - (disaggregated by POs classified as dynamic and in transition to market). ii. Market Access: Increase in agriculture sales for farmers supported by the project. (disaggregated by female-headed, male-headed, and indigenous and traditional communities). iii. Gender: Reducing (%) the inequality in gross sales between female-led and male-led Producer Organizations (POs).
	Number	iv. Agricultural Productivity: Farmers adopting improved agricultural technology (disaggregated by female, male, and youth) v. Resilience to Shocks: People with enhanced resilience to climate risks (disaggregated by female, male, and youth) (ScoreCard).
PDO #2. Increase access to resilient water services	Number	vi. Access to Drinking Water: People provided with water, sanitation, and hygiene, of which (%) is safely managed - (disaggregated by female , male, youth, families-led by indigenous and traditional communities) (ScoreCard).

Project Components

16. **Component 1. Increasing agricultural productivity, access to markets, and resilience to shocks (US$53,02 million IBRD and US$26,51 million from Government of Bahia).** This component will finance technical studies, technical assistance (TA), and matching grants to co-finance business and ethnodevelopment plans of producer organizations (POs) and to support investments in climate-smart agriculture (CSA)[30].

17. **Subcomponent 1.1. Pre-investments for business plans and ethnodevelopment plans.** This subcomponent will finance: (i) raising awareness about the matching grant opportunities for potential beneficiaries of the project; (ii) preparation of business plans, which will include assessments of: market opportunities, POs business management capacity, and its members primary production challenges; (iii) technical assistance to POs financial and its member on financial literacy, access to finance and financial management; (iv) organizational development through learning from successful market-oriented POs (e.g., exchange of practical experience); (v) capacity building to POs and its member on food and nutrition security; (vii) capacity building for POs and its members on CSA technologies and good farming practices; (vi) capacity building to POs and its members on issues related to gender and youth on agricultural value chains; (vii) capacity building to technical service providers (from both public and private sector) to enable them to implement the proposed innovations of the project; (viii) design and development of digital platforms for the delivery of and monitoring of agricultural extension services; (ix) PO's subscription to specialized digital services for market access; (x) food marketing studies and specialized technical services of sales prospecting in the agrifood system; (xii) technical assistance to ensure POs compliance with environmental required licensing; and (xiii) specialized services on logistic and operational support for POs; and (xv) support for POs participation in meetings, workshops, and events related to food industry and trade shows, among others. To properly finance the subprojects, the call for proposals will be value chain specific (i.e., cocoa, coffee, fruits, honey, livestock, etc).

18. **Subcomponent 1.2. Implementation of business and ethnodevelopment plans.** This subcomponent will co-finance through matching grants the business and ethnodevelopment plans ("subprojects") designed and approved under

[30] CSA practices and technologies are defined as those that contribute to climate change resilience, and/or climate change mitigation. CSA practices and technologies are those which contribute to achieving two or more of the three CSA pillars: improving productivity, adapting, and improving resilience to climate change, and mitigating climate change.

subcomponent 1.1. Subprojects under subcomponent 1.2 will be required to incorporate CSA practices and technologies as a criterion for the grant award. The matching grants will co-finance a range of good and services related to the implementation of the approved business/ethnodevelopment plans including: (i) works - small infrastructure linked to the adoption of climate resilient technologies and farming practices; and (ii) strategic inputs such as plant, equipment, machinery, and tools related to the requirements of the business/ethnodevelopment plan.

19. **An evaluation committee will oversee the selection process of POs.** This committee will, among other tasks, implement the following steps/tasks (see **Table 1**). A detailed explanation of all procedures and processes involved in the selection and approval process of POs will be provided in the POM.

Table 1. A brief overview of the main task to be performed by the evaluation committee.

Steps	Tasks
1. Raise Awareness	• Disseminate information about matching grant opportunities in rural areas through public calls for expression of interests (EOI). • These EOIs will outline eligibility criteria for participation.
2. EOI Evaluation	• Assess and select individual EOIs with the potential to be developed into business and ethnodevelopment plans.
3. Business/Ethnodevelopment Plan Selection	• Evaluate and select the business and ethnodevelopment plans submitted for implementation under subcomponent 2.2.
4. Selection and Evaluation Criteria	• Follow the eligibility and selection criteria specific to each grant window, targeted value chains, and climate change requirements. • Ensure that business plans selected properly rigorously incorporate activities to improve market accessibility, increase productivity, foster sustainability, and build climate resilience. • These strategies should be quantifiable and measurable for effective monitoring by the Project Management Unit (PMU).
5. Baseline, Interim Targets, and Outcomes	• Ensure that approved business or ethnodevelopment plans have baseline data, interim targets, and anticipated outcomes to ensure a comprehensive approach toward achieving project objectives.

20. **Subcomponent 1.3 - Improving access to rural credit, food safety certificates and environmental compliance.** It will finance: (i) advisory services to translate the approved business/ethnodevelopment plans of POs into individualized credit requests tailored to each family farmer's needs; (ii) advisory services to assist the POs to leverage their developed business/ethnodevelopment plans to access additional credit lines from financial institutions to complement the matching grants awarded by the project when needed; (iii) technical assistance on land rights formalization to support the completion of essential documentation for land ownership verification; (iv) technical assistance to guide POs through the process of obtaining food safety licenses and certificates necessary for market access; and (v) technical assistance to ensure compliance with environmental regulations for POs and their members, which is becoming increasingly important for accessing credit lines and markets. Financing under this component will support investments that generate benefits for climate change resilience and mitigation[31].

21. **Component 2**. **Bringing safe water services to rural communities (*US$26,6 million from IBRD and US$13,3 million from the Government of Bahia*).** While this component will fund water infrastructure to improve and expand the access to water services from rural dwellers, its main objective will be to support the Bahia state efforts to develop a rural water state policy and bringing about institutional changes in the water sector to mainstream a strategy for managing rural water

[31] The PMU will establish technical cooperation agreements with designated financial institutions such as Banco do Brasil (BB), Banco do Nordeste (BNB), Cooperativas de Crédito Rural com Interação Solidária (CRESOL), Sistema de Cooperativas de Crédito do Brasil (SICOOB), and Programa Nacional de Fortalecimento da Agricultura Familiar (PRONAF). This effort aims to expand the pool of available credit to POs and their members.

services. Specifically, the component will support the implementation of the new "*Centrais de Águas da Bahia*" Program, which will promote the Centers of Community Associations (CCAs), known as '***Centrais de Associações***' to address the chronic failures to reach sustainability of water services[32]. Following the client's priorities, the Project will target the provision of water services[33]. This component will finance both, technical assistance (TA) to create and strengthening the CCAs and works of investments related with water supply systems. All activities under this Component are designed to strengthen the climate resilience of the beneficiaries and to integrate climate change mitigation and adaptation strategies.

22. **Subcomponent 2.1. Strengthening and consolidating the multi-community management model for water supply services.** This subcomponent will support the establishment of the management model of "*Centrais de Associações*". It will finance: (i) the organization of new CCAs and strengthening of existing ones; (ii) development of management skills, business plans, and training in the administration, operation, and maintenance of water systems; (iii) community mobilization and organization to encourage active participation of community users, hygiene promotion and environmental education, promotion of connectivity and tariff payment behavior. The menu of the technical assistance package may include, inter alia: (i) programs to control and reduce non-revenue water losses, installation of pressure reducing valves, leak detection and control; (ii) implement demand management practices, including commercial systems, revenue policies, and customer outreach to promote water conservation and communication strategies with the users before, during, and after extreme weather events to enhance climate resilience; (iii) improve supply management, which may include the establishment of information systems to monitor water resource quantity and improvements in maintenance planning; and (iv) strengthen social accountability measures to improve customer responsiveness. The action plan developed by the state foresees an average time of 24 months to support existing CCAs and 60 months for new ones. It will also support the strengthening of the model at state level with the consolidation of the technical assistance support by the Bahia Water and Sanitation Company (EMBASA) and the Water Engineering and Sanitation Company (CERB).

23. **Subcomponent 2.2. Investments in water infrastructure.** This subcomponent will fund the design, construction of works and the supervision of investments related to the construction, expansion, and rehabilitation of drinking water supply infrastructure in targeted rural communities, where there has been a prior agreement to utilize the CCAs management model. It will finance, inter alia: (i) water intakes and borehole wells, pumping stations, transmission mains, water storage tanks, water treatment units including disinfection, distribution networks, household connections with water meters and, if applicable, environmental mitigation activities; (ii) technical and operational designs that will include hydrology and climate impact assessments, engineering designs, economic and financial assessments, social and environment aspects; and (iii) the supervision of works. Project activities would neither support the design and construction of new dams or rely on existing dams; water is expected to be supplied mostly by borehole wells, and in some specific cases from surface water streams, the hydraulic structures to be built will not fall under the category of storage or regulation dams or structures that could cause significant safety hazards as defined in ESS4.

24. **When designing and implementing the systems, CERB will adopt measures to increase the climate resilience of the water services**, including: i) reservoirs capacities sized on the basis of the pump's operating time, which will result in the adoption of larger reservoir volumes than recommended in conventional technical literature; ii) adoption of a safe yield equivalent to a maximum of 70 percent of the well's tested flow rate; iii) demand management to raise awareness on rational water; iv) use and/or drilling of a complementary well in low yield aquifers; v) furthermore, when operating the systems, CERB, through its Management Unit of the '*Centrais de Águas da Bahia*' Program (*Gerencia de Gestão de Programa Centrais, GECEN*), will monitor the operating flow rate of the wells to identify unexpected consumption

[32] The **Error! Reference source not found.** presents the results obtained in the Bahia's previous implemented project (P147157). It explains the implementation of CCAs (*Centrais de Águas da Bahia).*

[33] The Bahia Sustainable Development Project (P147157) included the provision of rural water and sanitation services. However, it struggled to generate demand for rural household sanitation.

increases and/or lowering of the flow rate, for the adoption of corrective and/or preventive actions to prevent system damages. All these activities reduce vulnerability to climate change.

25. **Component 3. Designing and Scaling Innovative Solutions (*US$4.7 million from IBRD and US$2.4 million from the Government of Bahia*).** This component will finance the design and scaling of innovations that can have a positive impact on the medium and long-term sustainability of the interventions on POs and Centrais.

26. **Subcomponent 3.1. Scaling innovations to improve productivity and access to markets**. It will finance: (i) the implementation of Units of Technological Reference (UTRs); (ii) implementation of experimental fields dedicated for research on novel CSA technologies tailored to the region's specific needs; (iii) developing innovative technology licensing to ensure wider adoption of proven innovations by POs; (iv) the provision of real-time weather data and early warning systems for climate risks to POs; (v) Implement pilot projects to evaluate the carbon footprint of agricultural technologies and practices; (vi) design and implement studies on agroforestry systems and reforestation; (vii) and implement an online platform offering technical assistance resources, educational materials, and market access information for POs; (viii) strategic market certification for POs (e.g, organic and/or fair-trade); (ix) the establishment of participatory guarantee systems (PGSs) for organic certification together with training programs to equip POs with the skills to manage PGS; (x) advisory services to POs in integrating Environmental, Social, and Governance (ESG) principles into their operations; (xi) acquisition of online platforms to secure online ordering, payment processing solutions, and real-time market price and product availability information systems; (xii) improvements in the BiblioteCAR; (ii) technical assistance to implement communication strategies to promote brands and products from POs; and (iii) promotion of POs brands and products in food industry events and trade fairs.

27. **Subcomponent 3.2. Implementing photovoltaic power plants (PVPP) for sustainable RWS**. This subcomponent will finance: (i) feasibility study - a comprehensive assessment to evaluate factors like solar irradiance, water demand, existing infrastructure, and estimated costs; (ii) system design and engineering - based on the feasibility study, engineers design the PVPP system, considering factors like panel type, inverter capacity, battery storage requirements, and integration with the existing water pumping infrastructure; (iii) acquisition of high-quality solar panels, inverters, batteries, and other necessary equipment and installation by qualified personnel; and (iv) commissioning and training - the system will be thoroughly tested and commissioned to ensure proper operation. Finally, training will be provided to local personnel for system maintenance and troubleshooting. All financing under this subcomponent will contribute to climate-smart outcomes through the promotion of renewable energies.

28. **Component 4. Contingency Emergency Response Component - CERC (US$0 million).** The CERC is a mechanism for borrowers (Bahia) to access funds rapidly to respond to an eligible crisis or disasters and health emergency. Standard conditions will apply to allow the activation of the CERC and ensure its adequate implementation, completion, and evaluation. An operation manual will detail implementation arrangements including activities that may be included, eligible expenditures, financial management (FM), procurement procedures and methods, as well as environmental and social (E&S) standards management framework for the implementation of CERC related activities.

29. **Component 5. Project Management (US15.5 million IBRD and US$7.7 million from the Government of Bahia).** It will finance activities related to: (i) financial management; (ii) procurement; (iii) monitoring and evaluation; (iv) managing compliance with social and environmental standards; (v) communication; and (vi) overall coordination from the Project; (vi) operating expenses and personnel costs of the Project Management Unit (PMU); (vii) information technology equipment, software for project management; (viii) hiring consultants in key project management areas; (ix) capacity building and training for implementation units; (x) the design and implementation of information management and communication activities on the project's processes and results; and (xi) implementation/improvement of project management systems. The administrative and operational process of calling, screening, selecting, awarding proposals, and managing contracts will be financed under component 5.

30. **Project estimated cost**. The estimated cost of Phase 1 is US$150 million, of which US$100 million is financed with resources from IBRD and US$50 million is co-financing from the State Government of Bahia. The estimated costs consolidated by component and sub-component is displayed in Error! Reference source not found..

Table 2. Estimated Costs

Components	Project budget US$ million			
	IBRD	Local	Total	%
Component 1. Increasing access to markets, productivity, and resilience	51.90	26.00	77.90	52.4
Component 2. Bringing safe water services to rural communities	26.70	13.30	40.00	26.9
Component 3. Designing and scaling innovative solutions	5.00	2.50	7.50	5.1
Component 4. Contingency Emergency Response Component - CERC	0.00	0.00	0.00	0.0
Component 5. Project Management	15.60	7.80	23.30	15.7
Total	**99.20**	**49.60**	**150.00**	**100**

Project Beneficiaries

31. **The project aims to reach at least 91,694 people.** Direct beneficiaries include family farmers (crop and livestock), indigenous people, *quilombolas*, traditional communities, producer organizations (community associations and cooperatives), and *Centrais* associations. At least 50 percent of beneficiaries across all project components will be women. For components 1, the estimated number of beneficiaries will reach 36,294. For component 2, the estimated number of beneficiaries is nearly 55,400. Additional beneficiaries include other food system actors, schools, public and private institutions, federal and state agencies.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

32. Overall, the project is expected to contribute to sustainable, resilient and inclusive rural development, generating positive environmental impacts and eco co-benefits. The environmental and social risk classification is proposed as Moderate. This accounts for the project scope and potential environmental and social risks and impacts resulting from the activities related to the small scale primary agricultural production, food processing, and the construction or rehabilitation works from small rural water supply systems. The project interventions are small-scale, and community based in nature which are not expected to have any significant or unmitigable social impacts and there will likely be no adverse impacts linked to resettlement or land acquisition. No significant adverse impacts are anticipated. The expected impacts are predictable, site specific, have minimal adverse impacts and easily mitigated. Based on the experience from previous project, CAR and CERB have developed a robust framework, and related systems to manage subprojects' risks and impacts, including subprojects selection and exclusion criteria, impact identification, and monitoring of performance. To manage the risks and impacts, CAR and CERB worked together and prepared a ESFM in accordance with ESF requirements, and strengthen the systems they already have. The ESFM includes criteria for the eligibility of subprojects and an exclusion list

including resettlement and activities that cause serious impacts on biodiversity. CAR prepared and published, prior to appraisal,a draft versions of SEP, ESMF, RF and IPPF. The final versions of these instruments, with consultation results, will be disclosed and adopted within 30 days of implementation, as described in the ESRS .To manage risks and impacts from this project, CAR must complete a new updated version of the ESMF during project preparation, in accordance with the requirements from ESF, and strengthen the systems they already have in place.

33. **Citizen Engagement**. The Project has a robust citizen's engagement approach. The participatory process, that includes consultations during preparation and implementation, will play a key role in engaging with stakeholders and receiving feedback from beneficiaries. The Project will use grassroot-level committees (e.g. Rural Development Forums/Collegiate Bodies and community associations) or other local participatory forum to support community participation and monitoring. The GRM will be linked to the Project's monitoring and will collect information on beneficiary feedback and close the feedback loop with stakeholders by the indicator: Beneficiaries satisfied with productive investments and water access (Percentage) (Disaggregate by gender, indigenous and traditional communities) Disaggregate by Component 1 beneficiaries and Component 2 beneficiaries. The Project will track the percentage of grievances responded to and resolved, in relation to the delivery of Project's activities, by the indicator: Complaints and inquiries received through the Grievance Redress Mechanism that are registered and addressed. (Percentage). Culturally appropriate materials and differentiated strategies will be used so that indigenous peoples and vulnerable groups are not excluded from surveys and instruments, and monitoring and evaluation strategies.

E. Implementation

Institutional and Implementation Arrangements

For the MPA

1. The World Bank, through its implementation support effort of the various phases, will work with MDA and Ministry of Agriculture, Livestock and Food Supply (MAPA) in coordinating the program participation, overseeing monitoring and evaluation activities, and fostering a robust learning agenda for the entire MPA. Each project management unit (PMU) will be staffed with monitoring and evaluation (M&E) and knowledge specialists who will be partially responsible for participating in the MPA learning agenda. Other specialized agencies from the Federal Government may participate in the overall MPA coordination and learning (i.e. Embrapa, National Agency of Technical Assistance – ANATER, Development Banks, among others) as needed to help the MPA's implementation. The implementation of the institutional arrangements for the MPA is, however, contingent upon on the federal level operation approval and/or trust funds made available for this specific purpose.

For the Bahia Sustainable Development Project (Phase 1).

2. **The borrower is the State of Bahia with the Federative Republic of Brazil serving as the Guarantor. The State Secretariat of Rural Development (SDR) will act as the implementing entity. The SDR will delegate the project implementation to Company of Regional Development and Action (CAR),** who will house a Project Management Unit (PMU). The PMU will oversee the management, coordination, monitoring and evaluation of all project activities and will assume key fiduciary responsibilities. The PMU will have full-time professionals dedicated to technical, operational, and administrative tasks**.** The SDR/CAR have considerable experience working with the proposed PMU, which was acquired through the implementation of previously projects financed by the World Bank[34].

3. Following the experience of the previous project, CAR will establish a results-based contract with Luis Eduardo Magalhães Foundation (FLEM) - a private non-profit institution that serves as a center for modernization and development of public administration, who will support the PMU in managing the project, including the recruitment of professionals needed for the project's execution. This shared management model has proven to be a best practice

[34] Produzir I (Loan 4623-BR), II (Loan 7327-BR), III (Loan 7732-BR), and Bahia Produtiva (P147157).

in previous World Bank-funded projects, offering agility in processes and high rates of professional retention throughout implementation[35].

4. To support the implementation of key activities of the project, CAR will establish cooperation agreements with: (i) federal institutions: EMBRAPA, ANATER, Universidade Federal do Recôncavo Baiano - UFRB, Comissão Executiva do Plano da Lavoura Cacaueira – CEPLAC, Banco do Brasil - BB, Banco do Nordeste - BNB; and (ii) state/municipal level public institutions including: Superintendência Baiana de Assistência Técnica e Extensão Rural – BAHIATER, Agencia de Defesa Agropecuaria da Bahia – ADAB, and Consorcios Públicos Territoriais[Error! Bookmark not defined.]; and (iii) credit cooperatives including: SISCOOOB and CRESOL. A Project Operating Manual (POM) will be prepared by the State Government of Bahia and agreed with the World Bank before effectiveness. The POM will detail: (i) roles; (ii) responsibilities, (iii) processes and (iv) procedures required to implement the project, among other things.

5. **The project will involve the Bahia Water Engineering and Sanitation Company (CERB), which is part of the State Secretariat of Water Infrastructure and Sanitation (SIHS)**. CERB will be a co-implementing entity for Component 2. It will be responsible for the construction of new and rehabilitation of old rural water supply systems and the social and environmental activities associated with it. In this component, CAR will be responsible just for setting up the new CCAs and continuing strengthening the existing ones. To implement the component 2, CERB will establish technical agreements with two key institutions in the water sector: EMBASA and GECEN. EMBASA will: (i) provide technical, commercial, and operational support to the CCAs, and (ii) contribute to increase the number of water connections by transferring rural water supply systems from EMBRASA to Centrais. In the other hand, GECEN will: (i) support planning and implementation of institutional strengthening for CCAs, (ii) provide technical support for the renewal of environmental regularization processes, (iii) provide technical support for the cadaster and/or update of existing rural water supply systems, (iii) implement the rural water system operational management software to strengthen Centrais, (iv) provide training for operators of rural water systems, and (v) procure gauging equipment for hydrometers.

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[35] FLEM and CAR have had a partnership since 2008, when Mata Branca project was implemented, with a World Bank grant.

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