OFFICIAL USE ONLY
R2019-0181/1

June 27, 2019

Closing Date: Thursday, July 18, 2019
at 6:00 p.m.

FROM: Vice President and Corporate Secretary

Brazil - Ceara Rural Sustainable Development and Competitiveness Phase II Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed loan to the State of Ceara with a guarantee from Brazil for the Ceara Rural Sustainable Development and Competitiveness Phase II Project (R2019-0181), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
President
Bank Group Senior Management
Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC, and MIGA

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

FOR OFFICIAL USE ONLY

Report No: PAD3167

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF US$ 100 MILLION

TO THE

STATE OF CEARÁ

WITH THE GUARANTEE OF THE FEDERATIVE REPUBLIC OF BRAZIL

FOR THE

CEARÁ RURAL SUSTAINABLE DEVELOPMENT AND COMPETITIVENESS PROJECT PHASE II

June 20, 2019

Agriculture Global Practice
Water Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

Exchange Rate Effective January 18, 2019

Currency Unit =	Brazilian Reais (BRL)
BRL 3.8=	US$1
US$0.263=	BRL 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Axel van Trotsenburg
Country Director:	Paloma Anos Casero
Senior Global Practice Director:	Juergen Voegele
Practice Manager:	Preeti S. Ahuja
Task Team Leader(s):	Barbara Farinelli and Juliana Garrido

ABBREVIATIONS AND ACRONYMS

AWPB	Annual Work Plan and Budget
CA	Community Associations
CAGECE	Ceará Water and Sanitation Utility *(Companhia de Água e Esgoto do Ceará)*
CAT	Climate Action Tracker
CBA	Community Based Adaptation
CDD	Community-Driven Development
CDP	Community Development Plans
CGE	State General Controller and Ombudsman *(Controladoria e Ouvidoria Geral do Estado do Ceará)*
COGERH	State Company for Water Management *(Companhia de Gestão dos Recursos Hídricos)*
CPF	Country Partnership Framework
CSA	Climate-Smart Agriculture
EMARTECE	Ceará State Rural Extension and Technical Assistance Company *(Empresa de Assistência Técnica e Extensão Rural do Ceará)*
ESMF	Environmental and Social Management Framework
EX-ACT	Ex-ante Carbon-balance Tool
FAO	Agriculture Organization of the United Nations
FEDAF	State Fund for Family Agriculture Development *(Fundo de Desenvolvimento da Agricultura Familiar)*
FUNCEME	State Meteorological and Water Resources Foundation *(Fundação Cearense de Meteorologia e Recursos Hídricos)*
GBV	Gender Based Violence
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GoC	Government of Ceará
GPV	Gross Production Value
GRM	Grievance Redress Mechanism
GWSP	Global Water Security and Sanitation Partnership
IBGE	Brazilian Institute of Geography and Statistics *(Instituto Brasileiro de Geografia e Estatística)*
IMA	Municipal Alert Index *(Índice Municipal de Alerta)*
IPCC	Intergovernmental Panel on Climate Change
IPECE	Institute of Research and Economic Strategy of Ceará *(Instituto de Pesquisa e Estratégia Econômica do Ceará)*
IPF	Investment Project Financing
IPPF	Indigenous Peoples Policy Framework
KfW	German Development Bank *(Kreditanstalt für Wiederaufbau)*
MFD	Maximizing Finance for Development
MSD	Household Sanitary Kits *(Módulos Sanitários Domiciliares)*
NDC	National Determined Contributions
PO	Producer Organizations

POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
RPF	Resettlement Policy Framework
RWSS	Rural Water Supply and Sanitation
SDA	State Secretariat of Agrarian Development *(Secretaria Estadual de Desenvolvimento Agrário)*
SEBRAE	Brazilian Service to Support Micro and Small Enterprises *(Serviço Brasileiro de Apoio às Micro e Pequenas Empresas)*
SESCOOP	National Services for Cooperativism Learning *(Serviço Nacional de Aprendizagem do Cooperativismo)*
SIASAR	Rural Water Supply and Sanitation information system
SISAR	Integrated Scheme for Rural Water Supply and Sanitation *(Sistema Integrado de Saneamento Rural)*
SOHIDRA	Superintendence of Water Works *(Superintendência de Obras Hídricas)*
SRH	State Secretariat of Water Resources *(Secretaria Estadual de Recursos Hídricos)*
STEP	Systematic Tracking and Exchanges in Procurement
TCE	State Auditing Court *(Tribunal de Contas do Estado do Ceará)*
UGP	Project Management Unit *(Unidade de Gerenciamento de Projeto)*
WSS	Water Supply and Sanitation

TABLE OF CONTENTS

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Brazil	Ceara Rural Sustainable Development and Competitiveness Phase II	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P167455	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
18-Jul-2019	31-Dec-2025

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to enhance access to markets and access to water and sanitation, adopting climate resilient approaches, by targeted beneficiaries in selected areas of the State of Ceará.

Components

Component Name	Cost (US$, millions)
Sustainable Economic Inclusion	68.79
Rural Water Supply and Sanitation Access	53.08
Institutional Strengthening and Project Management	31.41
Front-end-Fee	0.25

Organizations

Borrower:	State of Ceara
Implementing Agency:	Secretariat of Agrarian Development

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	153.53
Total Financing	153.53
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	53.53
Borrower/Recipient	53.53

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026

Annual	11.89	19.24	26.26	24.75	12.24	4.37	1.25
Cumulative	11.89	31.13	57.39	82.14	94.38	98.75	100.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Water

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate

9. Other	Substantial
10. Overall	Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36	✓	
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37	✓	
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

Schedule 2, Section I, A, 2: The Borrower shall create no later than three months after the Effective Date and thereafter maintain, at all times during the implementation of the Project, the UGP to carry out the Project coordination, management, planning, monitoring and evaluation with sufficient resources, decision making capacity, competent staff in adequate numbers and responsibilities, all acceptable to the Bank and as set forth in the Operational Manual.

Sections and Description
Schedule 2, Section I, A, 3: The Borrower shall create no later than one month after the Effective Date and thereafter maintain, at all times during the implementation of the Project, the Steering Committee, with representatives of all entities involved in Project implementation, with regular meetings and sufficient resources, all acceptable to the Bank and as set forth in the Operational Manual.

Conditions

Type	Description
Effectiveness	The Operational Manual has been adopted by the Borrower in a manner and with contents acceptable to the Bank.
Effectiveness	The Management Agreement has been signed on behalf of the Borrower, through SDA, and the Project Manager and all conditions precedent to its effectiveness (other than the effectiveness of this Agreement) have been fulfilled, in a manner and with contents acceptable to the Bank.
Effectiveness	The Partnership Agreements have been signed on behalf of the Borrower, through SDA, and the Strategic Partners and all conditions precedent to their effectiveness (other than the effectiveness of this Agreement) have been fulfilled, in a manner and with contents acceptable to the Bank.
Effectiveness	The Auditing Agreements have been signed on behalf of the Borrower, through SDA, and the Project Auditors and all conditions precedent to their effectiveness (other than the effectiveness of this Agreement) have been fulfilled, in a manner and with contents acceptable to the Bank.
Effectiveness	The Cooperation Agreements have been signed on behalf of the Borrower, through SDA, and the Cooperating Entities and all conditions precedent to their effectiveness (other than the effectiveness of this Agreement) have been fulfilled, in a manner and with contents acceptable to the Bank.
Disbursement	Retroactive financing will be allowed for all components of this Project up to an aggregate amount not to exceed US$ 20,000,000 for expenditures made up to 12 months before the signing date of the loan agreement and for eligible expenditures incurred no earlier than January 1st, 2019.

I. STRATEGIC CONTEXT

A. Country Context

1. **After a decade of rapid growth and social progress up to 2013, Brazil's economy first stumbled and then fell into deep recession.** A decade of sound macro policies and a favorable external environment contributed to fast economic and social progress between 2001 and 2010. However, the deterioration in both factors led to a steady reduction in growth, declining from an average of 4.5 percent per year in 2006–2010 to 2.4 percent in 2011–2014, followed by contractions of 3.5 percent per year in 2015 and 2016. While external factors triggered the slowdown, an expansionary policy response led to rapidly rising fiscal disequilibria and, with rising domestic political uncertainty, a loss of confidence and sharp drop in investment. Economic recovery remains weak with 1 percent growth in 2017 and 1.2 percent growth projected for 2018.

2. **The crisis threatens a decade of development progress.** Brazil experienced an unprecedented reduction in poverty and inequality between 2006 and 2015 when 24.8 million Brazilians escaped poverty and the Gini coefficient of household incomes fell to 0.51 in 2015 from 0.59 in 1999. Most of this reduction was explained by the creation of formal sector jobs, resulting in a sharp decline in the unemployment rate to a low of 6.8 percent in 2014. However, the economic crisis precipitated a rapid rise in unemployment with job losses of 0.6 million in 2015 and 2.0 million in 2016. As a result, poverty increased in 2015 and 2016. With ongoing tepid economic growth, poverty is estimated to have leveled off at 20.6 percent in 2017.

3. **Restoring fiscal sustainability is the most urgent economic challenge for Brazil.** To address unsustainable debt dynamics, in December 2016 the Government adopted a constitutional amendment to limit public expenditure growth, which entails an accumulated adjustment of 5 percentage points of Gross Domestic Product (GDP) for 2019–2026 and would stabilize debt at around 89 percent of GDP by 2026, declining thereafter. Implementing this fiscal adjustment requires alleviating the rigidities affecting public spending and revenue earmarking mechanisms, which comprise more than 90 percent of the federal government's primary mandatory spending. It will also require a comprehensive reform of social security to halt the projected increase in the deficit and possible adoption of controls on the wage bill and rationalizing programs to support private sector development. This large fiscal disequilibrium also affects subnational governments with limited capacity to cope with growing wage bill and pension payments unless reforms are adopted. While spending restraint will continue to dominate the fiscal agenda, there is large scope for efficiency improvements in public services. Thus, fiscal adjustment need will not come at the expense of worsening access or service quality. However, realizing efficiency gains requires structural changes to budget rules and incentives and is resisted by some public-sector interest groups.

4. **Brazil will also need to accelerate productivity growth and infrastructure development.** The income of an average Brazilian has only risen by 0.7 percent per year since the mid-1990s—one-tenth the rate in China and only half the average in the Organization for Economic Co-operation and Development countries. This is mainly explained by the lack of total factor productivity growth between 1996 and 2015. The productivity problem in Brazil stems from the lack of a conducive business environment, distortions created by market fragmentation, multiple business support programs, and a market that is relatively closed to external trade and competition. Brazil also posts one of the lowest rates of infrastructure investment (2.1 percent of GDP over 2000–2013) compared to its peers and the quality of this investment is low. Accelerating productivity growth remains a key priority for the country and there is limited space for public sector led growth. Reforms could focus on boosting market competition, greater access to external markets and cheaper inputs and technologies and simplifications to the tax system. Higher levels of investment in infrastructure will also be needed

to ensure adequate maintenance and expansion of the existing infrastructure stock necessary to meet the needs of the population and to increase Brazil's prospects for further economic growth and competitiveness. This calls for improved planning capacity at the Government level, improving the regulatory environment and leveraging private resources to finance investments.

5. **Brazil is short of its commitments under the Paris Agreement**. Brazil's actual progress towards achieving its National Determined Contributions (NDC) has been rated by the Climate Action Tracker (CAT) as "Insufficient," meaning that its targets are not consistent with agreed limiting warming to below 2°C. Brazil's remarkable progress in emissions mitigation observed since 2005 has reduced, with deforestation and resulting emissions picking up speed again in recent years. Total deforestation increased almost 30 percent in 2016 compared to 2015, with more than 50 percent in the Amazon region, adding around 130 $MtCO^2$ to total net emissions in 2016. This increase in emissions goes in the opposite direction of Brazil's commitments under the Paris Agreement, which included a target of zero illegal deforestation in the Brazilian Amazonia by 2030. To be able to control emissions and rapidly decrease levels as required by the Paris Agreement, Brazil will need to reverse the current trend of weakening climate policy, by sustaining and strengthening policy implementation in the forestry sector and accelerating mitigation action in other sectors, including a reversal of present plans to expand fossil fuel energy sources. On the other hand, Brazil and the State of Ceara in particular, face significant adaptation challenges in the rural sector. Recent studies show that the impact of climate change in the Northeast Region[1] and in the São Francisco river basin[2] , in particular, will result in further reduction of precipitation, intensifying the drought conditions.

6. **Located in the Northeast Region, the State of Ceará's economy represented 2.1 percent of the Brazilian GDP in 2016.** Coming from three consecutive increases in the GDP from 2012 to 2014[3], the State suffered the impacts of the fiscal crisis in 2014 and had negative growth rates of 3.85 and 5.33 percent in 2015 and 2016. During the first quarter of 2018, the State's economy showed signs of recovery, with an increase of 1.55 percent, compared to the same period in 2017. The agriculture and livestock sector represented 5.31 percent of this expansion. The State is composed of 184 municipalities with 9 million inhabitants, 74 percent of whom live in urban areas and 26 percent (2.3 million inhabitants) in rural areas. The state's rural economic activities were heavily impacted by the last drought, starting in 2011, which was one the worst droughts on record due to climate change.

7. **The State Government of Ceará (GoC) prioritized investments and programs to restore the economic dynamism and retain past social gains.** In 2015, the GoC launched the strategic plan "The Seven Cearás" prioritizing investments under seven development dimensions: (a) Participatory planning and public management for results; (b) Human rights, housing and social inclusion; (c) Business and entrepreneurship, including family agriculture; (d) Water and environmental sustainability, including infrastructure and energy; (e) Education, innovation, science and technology; (f) Health and sanitation; and (g) Public security and urban development. The Pluriannual Plan prepared for the 2016-2019 period also incorporated the State's efforts to improve the efficiency of public service delivery, through four strategic pillars: (i) a new public management model; (ii) strengthening citizen participation; (iii) promoting territorial development; and (iv) enhancing the inter-sectorial implementation of public policies. Most recently, the GoC launched the Long-term Strategic Development Plan – 'Ceará 2050' aiming to layout strategies to accelerate the State's long-term economic growth and to more effectively meet society's expectations for the provision of essential services - health, education, water supply, public security, and employment and income generation.

[1] Martins et al, 2013
[2] de Gouvello et al, 2017
[3] Ceará GDP growth rates in the period were 1.63%, 5.06% and 4.18%, while Brazil GDP growth were 1.92%, 3.00%, 0.50% respectively.

B. Sectoral and Institutional Context

8. **Agriculture is vital to Ceará State's rural economy.** Although agriculture accounts for only 4.5 percent of Ceará's GDP (which increases to around 8 percent when the whole agribusiness value chain is included), it is the main source of economic activities in rural areas, particularly for small landholders. Agriculture generates 21 percent of employment and is directly related to food and nutritional security, particularly for the poor rural population. Ceará has 341,000 agricultural households, covering almost 8 million hectares. Nearly 75 percent of agricultural households have less than 10 ha, representing less than 7 percent of the total area. Even though family agriculture[4] occupies a small area, it accounts for 59.3 percent of the Gross Production Value (GPV), as opposed to 40.7 percent of the large-scale farms. According to data from the Brazilian Institute of Geography and Statistics - IBGE (2010), about 52 percent of total people living in poverty in the State are residing in rural areas, where the poverty indexes show 38.9 percent living in poverty and 18.7 percent in extreme poverty (compared to 10.9 and 3.4 percent for the entire State, respectively).

9. **The scarcity and uneven distribution of rainfall also impacts the reliability of access to basic water services, such as potable and continued water supply in rural areas.** In 2014[5], potable water supply access in the State reached 78 percent of the urban population and only 37 percent of the rural population. Similarly, basic sanitation services reached 52 percent of the population in urban areas and only 18 percent in rural areas. Open defecation numbers in Brazil (over 4 million people) are higher than many Latin American countries[6]. In Ceara, water-related diseases (such as diarrhea) has been an issue, especially for children under 5 years-old. In 2016, Ceará's index for infant mortality was 14.3 (higher than Brazil's average of 14). The Human Development Index for Ceará is 0.682, the 10th worst in the country. Studies[7] recognize the strong link between health and access to improved water and sanitation. Poor sanitation and water quality and the resulting diarrheal diseases are the second and third leading risk factors for stunting worldwide. Concerned with this issue, the GoC has intensely invested in water supply and sanitation infrastructure and these investments have increased water distribution services and have started to improve access to sanitation (early 2008, rural areas had minimum access); however, the availability of these services is uneven in urban and rural areas and have been impacted by the long drought period. To reach universal access in rural areas it would be necessary to continue improving planning, infrastructure and management, as well as promoting a more efficient coordination of water resources management (WRM) and water services delivery to guarantee sustainability and the reliability of water services.[8] In addition, capacity building activities including social and behavior change techniques are expected to improve environmental and hygiene conditions, impacting human capital and increasing resilience of the population. Climate change has also taken a toll on the sector with the semiarid Brazilian Northeast suffering from a prolonged drought since 2012.

10. **Lack of opportunities and work hardships have contributed to the migration of large numbers of youth to urban areas and increased the impoverishment of women.** Young people often perceive agricultural activities as labor-intensive and unprofitable, opting to migrate to urban centers in search of better opportunities. According to the Institute of Research and Economic Strategy of Ceará (*Instituto de Pesquisa e Estratégia Economica do Ceará* - IPECE), rural youth account for around 20 percent of the state's youth population and they are among the most disadvantaged of groups. Migration of rural men also resulted in increases in female heads of households, who need to support their families,

[4] In Brazil, a family farm is defined by the Family Farming Law (Law No. 11,326/2006), based on four criteria: (i) does not have under any tenure regime an area of more than four fiscal modules; (ii) predominantly relies on its own family labor; (iii) household income predominantly originates in the family farm; and (iv) family members operate the farm.
[5] IPECE. Anuário Estatístico do Ceará, 2015. 13.2.1 – Water supply, Sanitation and Solid waste.
[6] Instituto Trata Brasil, 2018. "*Benefícios econômicos e sociais da expansão do saneamento no Brasil*"
[7] Instituto Trata Brasil, 2018. "*Benefícios econômicos e sociais da expansão do saneamento no Brasil*" and World Bank, 2018. "Water and Human Capital – Across the lifecycle.", to mention a few.
[8] "*Ceará 2050. Juntos pensando o futuro*." Status of the Water Resources in the State.

having fewer work opportunities and lower wages than men. Currently, only about 20 percent of family productive units are headed by females[9]). At the same time, the gender gap in average earnings in Ceará[10] is estimated in around 23 percent. In rural areas, it is estimated that women spend on average about 18.1 hours per week in household and care-taking tasks, including about 6.3 hours per week to collect water, which possibly indicates the gender gap is even greater in these areas.

11. **Rural population and agriculture activities are highly vulnerable to climate conditions.** Roughly 91 percent of the Ceará's territory is in the semiarid region of Brazil, with elevated temperatures, spatial and temporal variability of rains and high-water scarcity. The dominating natural vegetation in this semiarid region is a savanna-steppe known as *Caatinga*, that has been degraded by inadequate land management (slash and burn practices), over-grazing and over-exploitation. This region is the most vulnerable Brazilian ecosystem due to further reduction of rainfall deficit and increased aridity. Since the predominant soils are superficial and vulnerable to degradation and erosion, areas with bare soils over long periods are most prone to desertification. Different studies have shown that the *Caatinga* areas of superficial soils are generally exposed to high rates of soil erosion, generally reaching averages of annual soil losses of about 50 metric tons per ha[11].

12. **Worsening agro-ecological conditions have recently prevailed**. This reality was worsened by the six consecutive years[12] of persistent drought experienced in Brazilian semiarid region (and affecting more than 90 percent of the area of Ceará) since 2011, including one year when rainfalls were 46 percent below the historical value, and four years were 23 percent below the historical value. A recent study[13] has estimated that all categories of soil degradation (moderate, high and very high) have increased during 2000-2016, but the variation became more significative during 2007-2016 where the total areas classified as "degraded" in the semiarid region of Brazil increased by around 17,518 Km^2 reaching a total of about 72,708 Km^2.

13. **There is an urgent need to increase resilience to climate and weather impacts.** About 92 percent of family farmers do not have access to irrigated land and thus depend entirely on rainfall. Production of certain crops (maize, beans and rice) and livestock production (bovine, swine and poultry) were severely affected by the drought from 2011 to 2016. Climate Change models project significant temperatures increases for 2020-2099 for the interior of Ceará coupled with decrease in rainfalls. Although climate models are less accurate in forecasting rainfall distribution, an overall increase of extreme events could be also expected. This would further increase the challenge to climatic resilience of agricultural production in the Northeast of Brazil. Despite this context, resilience has increased as farming activities grew more than other economic activities in the State in 2017, a very water scarce year. To continue coping with adverse climate conditions, agricultural systems need to build more resilience through expanding water supply for agriculture, and climate-smart agriculture (CSA) practices and technologies, which can help raise agricultural productivity, reduce rural communities' vulnerability to weather extremes and offer some protection to farmers from the impacts of food price volatility. As such, there is a need to promote climate adaptation amongst the communities that are most heavily hit by climate shocks and provide support for them to adapt with climate-informed economic opportunities.

[9] IBGE, 2017
[10] United Nations Development Programme, 2017
[11] Araujo Filho, 2013 cited by Tomasella, J. et al, 2018
[12] During the drought of 2012-2016, nearly 78 percent of the small farmers in Ceará accessed the *Garantia Safra* crop insurance. This scheme was designed by the former Ministry of Agrarian Development (MDA) as an income compensation mechanism for family farmers who plant maize, beans, cassava, cotton and rice in the semi-arid of Brazil. The program disburses a fixed amount (currently R$850) to farmers when the occurrence of a severe drought or excess of rainfall has caused crop losses above 50% of the expected yield.
[13] Tomasella, Javier; Viera, Rita; Barbosa, Alexandre; Rodriguez, Daniel; de Santana, Marcos; Sestini, Marcelo. Trends in the Northeast of Brazil over the period of 2000-2017.International Applied Earth Observation Geoinformation (2018).

14. **Solid food and agriculture systems have potential to generate climate smart jobs and contribute to the State's GDP**. Although precipitations have been gradually reducing and climate change models project further reductions, still the rainfed crop potentials in normal years (at least 800 mm year in the driest areas) are adequate to support some specific crops and value chains, when relevant technologies and good crop management are applied. With the adoption of CSA practices and technologies, there exist solid opportunities for the food and agriculture system to augment its capacity to adapt to the agro-ecological and precipitation changes. During the past 20 years, rainfall trends reduced by 14 percent while the trend of total agricultural production increased by around 40 percent. A particularly revealing example is milk production in Ceará that during the recent consecutive drought years has increased. The drought episodes forced cattle and goat herders to intensify production, improve alimentation, scale up new sources of animal feed such as the "*palma forrageira*" (O*puntia Ficus Indica*, a drought resistant cactus), including with the support of the Bank-supported ongoing Sao Jose III project. The State thus has an opportunity to leverage CSA technologies and practices, improve linkages to markets to increase productivity and enhance resilience of the sector while reducing greenhouse emissions.

15. **State's institutions to track agriculture-water nexus issues.** Through the 2007 Law No. 13,875, the GoC created the State Secretariat of Agrarian Development (*Secretaria Estadual de Desenvolvime-nto Agrário - SDA*) to plan, coordinate, and execute federal and state level policies and programs for rural development, with emphasis on family agriculture. The State counts with a network of public and private technical assistance and rural extension (ATER) institutions to assist in the implementation of those policies and programs. The State Rural Extension and Technical Assistance Company *(Empresa de Assistência Técnica e Extensão Rural do Ceará – EMARTECE),* a public agency linked to SDA, is the leading ATER institution in Ceará. The existent ATER network has proved uncoordinated and insufficient to meet the demand of family farmers and rural settlers in the State. Recently, the Governor announced a proposal to recruit new technicians to EMATERCE to increase the coverage of ATER across the State. However, there is an urgent need to strengthen the institution to build strategic and operational capacity, as well as redefine its role and complementarity vis-a-vis the existing private ATER providers in Ceará. Also, given the State's fiscal constraints to recruit additional public servants, SDA relies on the partnership with the Agropolos Institute of Ceará (Agropolos) to operationalize its activities. Agropolos is a non-for-profit civil organization with a public mandate with an independent legal personality. On March 7, 2002, Agropolos was accredited as a Social Organization (OS) to provide support to rural policies, meeting the requirements of State Law No. 12,781 of December 1997, with the GoC, through State Decree No. 26,528 and State Decree No. 29,320 of June 12, 2008.

16. **Along with agricultural policies, SDA is also responsible for implementing water and sanitation infrastructure in rural areas to expanded water coverage for human and productive consumption.** As a novelty in the sector for the country, the GoC approved the complementary Law No. 162 of June 2016 to establish the State water supply and sanitation services (WSS) Policy, especially focusing on rural challenges. The law establishes that the Secretary of Cities is responsible for coordinating the WSS sector in the State; and for rural WSS (RWSS), will work in close collaboration with SDA and the State Secretariat of Water Resources (SRH). The institutional framework for water resources was established, since 1987 with the creation of the SRH, the Superintendence of Water Works (*Superintendência de Obras Hídricas - SOHIDRA*), and the State Meteorological and Water Resources Foundation (*Fundação Cearense de Meteorologia e Recursos Hídricos* – FUNCEME), followed by the creation of the State Company for Water Management (*Companhia de Gestão dos Recursos Hídricos* – COGERH) in 1993, which is responsible for managing water resources and providing bulk water supply services. The Ceará Water and Sanitation Utility (*Companhia de Água e Esgoto do Ceará – CAGECE*) is responsible for treating and supplying potable water to urban end users. CAGECE is responsible for the provision of (mainly urban) water supply and sanitation services to 152 municipalities out of 184, reaching 5.7 million beneficiaries. Since 1996, the GoC supported the creation of the Integrated Scheme for Rural Water Supply and Sanitation

(*Sistema Integrado de Saneamento Rural* - SISAR) – a federation of community associations with technical support from CAGECE – to carry out the maintenance of water supply systems at scale for rural areas with operational support from community members. Since then, over 680,000 inhabitants are being serviced with piped water supply by one of the eight existing regional SISAR management model scheme. Water tariffs are collected to sustain services provision. 2018 SISAR numbers indicate that 96 percent of users are regularly paying the bills. The GoC recognizes SISAR as the government model for managing water services provision in the State. Bank's studies[14] have also recognized SISAR's scheme as best practice. However, despite all efforts, sustainability challenges still remain for water services provision and the difficulties for institutional coordination, constraining the long-term impacts in terms of increasing the quality of life of the rural population.

17. **A recently established water services working group, along with improved planning and institutional capacity, will assist the State to be more effective towards reaching sustainable RWSS access.** In October 2018, the Secretary of Cities has established a Working Group to discuss and implement public policies for rural WSS (RWSS WG)[15], but also to coordinate actions in the sector and agreeing about sector challenges[16]. As part of the State's strategy to improve knowledge about the sector, actions were prioritized to scale up the RWSS information system (SIASAR) to more communities in order to better subsidize decision-making for planning, monitoring and managing the water supply systems implemented in rural areas by all state and federal entities[17]. In addition, the Bank is supporting the preparation of the *Malhas D'água* Project, which would have complementary activities in support to the sector by preparing the State WSS Plan (including both the urban and the rural challenges); preparing studies to map the State's main values chains water demands; and water supply infrastructure designs and intervention to increase urban and, potentially, rural potable water access.

18.**Irrigation potential and opportunities**. Over the years, the GoC has improved its monitoring and planning capacity on water availability, as COGERH and FUNCEME provide daily reports on water reservoirs (around 100) and groundwater levels. This information allowed the GoC to identify vulnerabilities in the water infrastructure and reformulate piped water schemes (especially with the State's *Malha D'água*[18] Program) to improve water services management for rural and urban population and to continue the integration of water basin for multiple uses. Moreover, Ceará has potential for groundwater use in specific areas of the state and the ongoing project has already financed several wells, mostly for drip irrigation. The GoC has identified opportunities to increase irrigation by diversifying water sources, including reuse and rain harvesting systems; identifying productions that rely less on water, and Community-Based Adaptation (CBA) technologies customized to the semi-arid region. Wastewater reuse could be potentially applied to industrial and agricultural needs that correspond to 70 percent of the total water demand in the State[19].

19.**Given these opportunities and challenges, the GoC had established a long-term policy agenda to support the poverty reduction and economic development in rural areas.** Starting in the 1980s, the Federal government launched interventions[20] to bridge the development gap between rural and urban areas and relied on the States for the

[14] World Bank, 2017. Sustainability Assessment of Rural Water Service Delivery. Findings of a Multi Country Review and World Bank, 2016. *Estudo de modelos de gestão de serviços de abastecimento de água no meio rural no Brasil.*

[15] The following institutions will take part of the RWSS WG: SDA, SRH, State Regulatory Agency- ARCE, National Health Foundation – FUNASA, National Association of Municipal Water and Sanitation Services Providers – ASSEMAE, CAGECE, SISAR and Association of Municipalities of the Ceara State – APRECE.

[16] Such as planning, environmental license, regulation, information system, community association services provision, technical standards, technologies, sustainability and financing focusing on the universalization of service provision etc.

[17] Governo do Estado do Ceará. Secretaria de Recursos Hídricos. *Plano de Ações Estratégias de Recursos Hídricos do Ceará*, March 2018.

[18] To be partially financed by a Bank loan in prepation - "Ceará Water Security and Governance" Project (P165055) – the *Malhas D'água* Project

[19] Governo do Estado do Ceará. Secretaria de Recursos Hídricos. Plano de Ações Estratégias de Recursos Hídricos do Ceará, March 2018.

[20] The main policies were created to improve electricity connectivity (*Luz para Todos*), water supply (*Água para Todos*), microfinancing access

implementation of the programs. In line with this strategy, in 2002, the GoC prepared a Bank-financed operation to implement this policy, the Rural Poverty Reduction Project – *São José I* (P050875 - US$37.5M), whose objective was to strengthen the State's capacity to implement and complement Federal programs to improve the rural poor's access to basic social and economic infrastructure and services. Using a Community-Driven Development (CDD) approach, the project financed basic infrastructure subprojects (electricity, water supply and productive activities) and enhanced local governance to increase citizen participation and transparency in decision-making, by strengthening community associations and municipal councils. In 2006, an Additional Financing for the Rural Poverty Reduction Project – *São José II* (P100791 - US$37.5M) was approved to scale up the positive results from the previous operation (over 1,400 community subprojects were financed, benefiting 370,000 people, as per the Implementation Completion and Results Report (ICR) assessment).

20. **Progress in poverty and extreme poverty reduction over a decade, led GoC to upgrade the CDD approach by adding an element of competitiveness to the rural development efforts.** In 2010, the Federal Government approved the "Ceará Rural Sustainable Development and Competitiveness Project" – *São José III* (P121167 - US$100M IBRD loan), to be implemented in two phases. The project focused on structuring a "pipeline" of increasingly entrepreneurial, market-driven, productive and creditworthy small-farm producers. Also, the project supported the State's efforts to universalize the access of water supply for human consumption and sanitation for rural areas. Along with CAGECE, SOHIDRA, and SISAR for water investments, the project also partnered with the Ceará State Rural Extension and Technical Assistance Company *(Empresa de Assistência Técnica e Extensão Rural do Ceará – EMARTECE)* to support the execution of productive activities. The project has benefitted over 7,500 family farmers under productive subprojects and around 22,000 and 39,000 people with improved access to rural water supply services and sanitation, respectively.

21. Those long-standing investments have contributed to improvements in the State's overall socioeconomic indicators in the last decade and, most recently, buffered the effects of the economic crises which started in 2014 and the prolonged drought period. The proposed Project brings a unique opportunity to build upon lessons learned and consolidate ongoing investments by reducing the agro-climatic vulnerability of rural communities, reach a larger share of the rural population that remains uncovered by some basic public services, and strengthen the State's institutional capacity and sustainability to plan, implement and develop better coordinated policies and programs in rural areas.

C. Relevance to Higher Level Objectives

22. **The proposed Project is well aligned with the sectoral rural development's vision of the State of Ceará.** The Project continues to support the State's short and long-term policies to reduce poverty and promote economic development in rural areas. The Project's phase II became even more relevant as the recent economic recession in Brazil and the prolonged drought period in Ceará challenged the economic growth and water security in the rural communities. The proposed investments are aligned with the strategic plan "The Seven Cearás" prioritizing actions under three development dimensions: (a) business and entrepreneurship, including family agriculture; (b) water and environmental sustainability, including infrastructure and energy; and (c) sanitation and health. The Project also aims to contribute to the State's Long-term Strategic Development Plan – 'Ceará 2050', which lays out strategies to accelerate the State's long-term economic growth and to more effectively meet society's expectations for water supply, employment and income generation.

23. **The proposed Project is in line with government's vision captured in the World Bank Group's FY18-FY23 Country**

(National Family Agriculture Program - PRONAF), and land tenure and agrarian reform (INCRA).

Partnership Framework for Brazil (CPF Report #113259-BR, discussed by the World Bank's Executive Directors on July 13, 2017)**.** In this regard, the Project contributes to all the focus areas of the CPF. Under Focus Area 1: Fiscal consolidation and government effectiveness, the Project aims to support a sustainable institutional strengthening and coordination of key agencies, relevant to the rural and water sectors, to improve the State's strategic and operational framework for delivering technical assistance and extension services for rural communities. Under Focus Area 2: Private sector investment and productivity growth, the Project aims to reduce financial market distortions to improve resources allocation and producers' credit access by empowering their organizations to meet market requirement and reducing risks and costs associated with their businesses. Under Focus Area 3: Inclusive and sustainable development, the Project aims to promote socioeconomic development of poor rural producers and vulnerable groups through investments that contribute to improved climate resilient agricultural production, management of local agrobusinesses, and access to secured sources of potable water and sanitation.

24.**Furthermore, the proposed Project is aligned with the World Bank Group's twin goals of reducing poverty and boosting shared prosperity, as well as with the Agricultural and Water Global Practice's global and regional strategies.** The Project has a dual focus: (i) on poverty reduction, through investments in water supply and sanitation in rural communities to improve the living conditions, promote social inclusion, improve quality of life and reduce the vulnerability of the poor populations in the targeted areas; and (ii) on shared prosperity, through investments on climate-smart agriculture and productive market-driven interventions. A poverty and social impact assessment is included in the project design to further refine the causal linkages between interventions to be supported by this operation and impacts on the poor and the vulnerable, including by gender. The Project also is aligned with the agricultural and water sector's global and regional strategies by: (i) strengthening, in a sustainable matter, key agricultural value-chains and food systems, since Latin America is the main source of food net exporting for the world; and (ii) supporting governments to universalize access to water and sanitation, in particular to poor population, optimize the water use in agriculture, and adapt to climate change and water extremes.

25.**The proposed Project will contribute to WBG Corporate Commitments**. First of all, the Project contributes to the climate change agenda of the WB. Its main objective is adaptation to climate change for climate-afflicted communities and this sector. The project is targeted to the high climate risk communities and economic activities. Furthermore, the project design is consistent with the following commitments: (i) Climate Change mitigation, by helping the Borrower country make progress towards its global commitments to reduce GHG emissions in line with its NDCs through mitigation efforts incorporated in the main project activities; (ii) Gender, the Project will act to reduce gender gaps by improving women's income and reducing the time spent collecting water (see paragraph 48 for more details); and (iii) create pre-conditions for full implementation of Maximizing Finance for Development (MFD), by supporting and enhancing the skills of selected producer organizations and their members and providing information that will leave them better prepared to interact with established market players**.**

II. PROJECT DESCRIPTION

A. Project Development Objective

26.**PDO Statement.**

The Project Development Objective (PDO) is to enhance access to markets and access to water and sanitation, adopting climate resilient approaches, by targeted beneficiaries in selected areas of the State of Ceará.

PDO Level Indicators

Access to markets:

(a) Increase gross value of sales (in real terms) by members of organizations participating in approved subprojects (percentage)

Access to water and sanitation:

(b) People provided with access to improved water sources (number, Core Results Indicator - CRI)

(c) People provided with access to improved sanitation services (number, CRI)

Adoption of climate resilient approaches:

(d) Farmers (members of supported organizations) adopting improved agricultural technology (number, CRI).

B. Project Description and Components

27.**Geographical Focus**. To focalize productive and water interventions in priority territories, one of the first steps to be implemented under the Project will be to carry out a municipal classification to establish a prioritization based on the juxtaposition of some or all of the following parameters: (i) existence of strategic[21] value chains showing high potential to promote competitiveness and inclusive growth; (ii) Municipal Alert Index[22] showing climate vulnerability levels above and index of 0.72 (Medium-high and above); (iii) Agro-Climatic Zones showing level of natural resources and climatic conditions capable of supporting development of value chains (even though with existing risks); (iv) presence of priority groups, mainly family farmers organizations capable of responding to the support offered under the Project, but also including possible significant participation by women, youth, and other vulnerable groups; and (v) assessment of water availability. These studies are expected to be completed within the first year of implementation. This effort will allow greater geographic intersections between productive and water investments. Because of the climate and vulnerability risk targeting to areas and populations, the entire project will provide support for adaptation to climate impacts to the heaviest-hit areas and segments of the population to adapt economically through sustainable economic inclusion and through the provision of resilient water, sanitation and irrigation services.

28.**Strategic Approach**. The proposed Project has introduced innovations compared to previous efforts in rural areas, mainly focusing on: (i) definition of key priority territories where the activities are more likely to produce sustainable impacts and address climate risks; (ii) increased focus on larger groups of beneficiary organizations, with more chances to enhance competitiveness and sustainability; (iii) greater emphasis on vulnerable groups, including indigenous peoples, women and youth and those exposed to highest climate risks; (iv) measures to ensure enhanced and sustainable formal linkages with prospective buyers; (v) redesigning the investment cycle of the productive subprojects to increase efficiency and quality; (vi) greater interconnection between the productive activities and the improvement of water services, as well as expansion of integrated systems and household sanitary modules; and (vii) strengthening the interinstitutional coordination and capacity of strategic public institutions to improve quality and sustainability of public service delivery

[21] Value chain selection will based on the following criteria: i) high predominance of family farmers already active at the production level; ii) market opportunities to increase farmers' income; iii) adequacy with climatic conditions, use of natural resources, lower water production requirements and potential for territorial development; iv) high potential to develop geographical branding through products and services; v) potential to create new jobs in rural areas (and across the value chain), particularly for women and youth.

[22] The Municipal Alert Index Series (IMA) of the Research and Economic Strategy of Ceará (IPECE) is calculated for the 184 municipalities of State of Ceará from a set of 12 indicators, which capture climatic, agricultural and social vulnerabilities using meteorological, agricultural production and social assistance indicators. According to the IMA of 2018, the municipalities with highest vulnerability rate are: Monsenhor Tabosa, Deputado Irapuan Pinheiro, Boa Viagem, Piquet Carneiro, Parambu, Catarina, Solonópole, Saboeiro, Araripe, Tauá, Mombaça, Milhã, Jaguaribe, Independência, Madalena, Campos Sales, and Paramoti. For more details see *https://www.ipece.ce.gov.br/wp-content/uploads/sites/45/2018/09/IMA_2018.pdf*.

in rural areas (see details in Annex 2). The strategic focus of the project is to provide resilient water and sanitation infrastructure and climate-adapted economic opportunities to areas that experience highest climate shocks.

29.The Project is structured within three components and six subcomponents as follows:

30.**Component 1: Sustainable Economic Inclusion (US$68.79 million; IBRD loan US$43.54 million).** The purpose of the component is to improve the access for family farming producers' organizations (including priority vulnerable groups, women and youth) to dynamic markets, thus leading to more sustainable sources of income. It is expected to benefit about 13,000 households through the financing of about 430 subprojects. This will support the most climate-shock affected groups to access climate-proof economic opportunities. Market access will be fostered through the identification of private and public buyers and the formulation and implementation of business plans, under subprojects, to meet market requirements. Through their own producers' organizations (PO), family farmers will have possibilities to mitigate the impact of small farm size (atomization), adopting new technologies and increasing their competitiveness, improving product quality, quantity, and traceability as required by the high-end value chains. Moreover, given the climate variability and water scarcity, the component will pay special attention to increase the capacity to manage potential impacts of climate change to agro-ecosystems, by promoting technologies and agricultural and resource management practices that have demonstrated stronger effects on farm sustainability and effectiveness in semi-arid rural areas and are well adapted to agro-climatic conditions in the State for 7,000 farmers. The component will also identify the need for improvement in water supply, either for human consumption or for productive use, for households involved in subprojects to be financed. The identified demand will be evaluated as part of the activities of component 2 to attend these households with water supply systems or for analysis of the feasibility for reuse of gray water for productive purposes.

31.**Subcomponent 1.1: Strengthening Organizations for Enhanced Market Access (US$60.24 million; IBRD loan US$37.88 million).** This subcomponent supports the preparation and implementation of Productive Subprojects by selected Producer Organizations in priority areas through: (i) technical assistance, carrying out pre-investment studies, preparation of business plans, capacity-building activities, *inter alia*; and (ii) the provision of Matching Grants to Producer Organizations for carrying out Productive Subprojects, including, *inter alia*: minor on-farm infrastructure; energy, water and soil conservation and management measures; provision and utilization of inputs, equipment and tools; complementary technical assistance services; support to meet legal environmental and sanitary requirements for market access; implementation of sustainable management plans (especially agro silvo pastoral) in areas of Caatinga.

32.**Subcomponent 1.2: Improving Social and Productive Inclusion for Vulnerable Groups (US$8.55 million; IBRD loan US$5.65 million)**. Support the preparation and implementation of Investment Subprojects in selected organizations of priority Vulnerable Groups in rural areas through: (i) technical assistance, capacity-building activities and preparation of community development plans; and (ii) the provision of Matching Grants to Vulnerable Groups for carrying out Investment Subprojects to increase food security and income generation initiatives through improved productivity, greater efficiency in water use, and increased resiliency to climate change.

33.**Component 2 – Rural Water Supply and Sanitation Access (US$53.09 million; IBRD loan US$35.35 million).** The objective of this component is to support the State's efforts to universalize access to improved water and sanitation by investing in sustainable and resilient service provision in prioritized rural communities, which are subject to the highest climate risks. Water and sanitation infrastructure investments will include: (i) water supply for human consumption for communities identified on both components 1 and 2; (ii) rural onsite sanitation for communities supported with water interventions; (ii) reuse of grey water and of wastewater from desalinization processes to support agricultural production;

and (iv) protection or recuperation of water sources. Lack of access to water and sanitation has immediate implications on the health and quality of life of the rural population, moreover, waterborne diseases are known to have a greater impact on children under 5 years old, and pregnant and lactating women. In this sense, the activities to be financed under Component 2 have the potential to reduce gender gaps by shrinking the time spent by women collecting water and lessening the likelihood of waterborne diseases with improved/new water access and sanitation infrastructure. This component also supports the adaptation to climate-change, particularly among drought affected population, by introducing technologies that will allow the reuse of gray water for agricultural productive purposes and the conservation and recovery of fragile watersheds ecosystems.

34. **Subcomponent 2.1: Expanding Water and Sanitation Access (US$49.13 million; IBRD loan US$32.72 million).** This subcomponent will support: (i) the construction or rehabilitation of water supply systems[23] for prioritized communities, including energy supply and the adoption of technological innovation aiming at reducing costs, increasing resilience and improving system operational efficiency and (ii) the construction or improvement of onsite sanitation structures such as household sanitary kits or treatment units in favor of selected communities who are beneficiaries of water interventions.

35. The new water supply systems will be financed through three approaches: (i) in response to the demand of component 1; (ii) spontaneous demand; and (iii) induced demand; and will support the rehabilitation of water supply systems[24] of a specific number of communities prioritized by SISAR to join the existing operation and maintenance (O&M) scheme to improve the SISAR scheme sustainability. Water supply systems will include the intake from water sources (most common are wells or small reservoirs), simplified treatment (e.g. desalinization, filtration and disinfection), reservation, distribution, macro and micro-metering; including the energy supply connecting to the grid (if existent) or another energy efficient[25] solution. The subcomponent will require that systems are resilient to climate change and create incentives in the design of the infrastructure for the adoption of technological innovation (e.g. solar panel, chlorine equipment, etc.) aiming to reducing costs, increasing resilience and the operational efficiency of the systems. Water sources availability and alternatives would be assessed before the design and implementation of subproject with support from COGERH and FUNCEME's data and expertise.

36. In addition, this subcomponent will support the construction of onsite sanitation structures– complete household sanitary kits (*módulos sanitários domiciliares - MSD*) or treatment units for existing sanitary kits - in the communities identified to receive new water systems[26]. Piloting of a new approach for families who desire to make improvements to existing sanitary kits based on demand using microcredit (via the State Fund for Family Agriculture Development – *Fundo de Desenvolvimento da Agricultura Familiar - FEDAF)* will be tested. Sanitary kits include water-flushed toilet, water tank, laundry, washbasin, shower), inspection box, and treatment using septic tank. Capacity building and behavior change activities will be carried out to promote hygiene, the rationale use of water and of the sanitary kits. Collection and treatment of the sludge will be tested using the SISAR scheme. Therefore, the operation of these sanitary kits is expected to be made climate-resilient by being very water use efficient.

37. **Subcomponent 2.2. Increasing Water Security and Resilience (US$3.96 million; IBRD loan US$2.64 million).** This subcomponent supports the implementation of water reuse systems for agricultural production purposes in response to subcomponent 1.1, and activities aimed at the protection and conservation of water sources surrounding areas for

[23] Approximately 80% of financing is expected to support new systems.
[24] The rehabilitation of water infrastructure will explore opportunities to improve energy efficiency above the existing levels as well as improve the systems resilience.
[25] Above the existing energy efficiency levels and comply with high energy efficiency certification schemes.
[26] Costs for construction of onsite sanitation structures and treatment units for existing sanitary kits are estimated at USD 36 million.

communities who benefited from water supply interventions under subcomponent 2.1 of the Project.

38.More specifically, the subcomponent aims to increase the availability and access of water for agricultural production purposes by financing the implementation of water reuse systems in response to the demands of component 1 (as indicated by the environmental management or business plans); as well as the promotion of activities aimed at the protection and conservation of water sources (small reservoirs, river banks etc.) surrounding areas for communities who benefited from water supply interventions. The activities relating to reuse of gray water/renewable water along-side the water harvesting and conservation efforts will increase the efficiency of water deployed for production purposes in this water stressed State. These activities directly address climate adaptation for the heavily climate-affected agriculture in this drought-prone area.

39.**Component 3 – Institutional Strengthening and Project Management (US$31.41 million; IBRD loan US$20.86 million).** The overall objective of the component is to strengthen the organizational, management, knowledge and operational capacity of key implementing State institutions, as well as to provide overall Project Management and Supervision.

40. **Subcomponent 3.1. Institutional Strengthening and Capacity Building (US$13.04 million; IBRD loan US$8.69 million).** This subcomponent aims to strengthen the organizational, management, knowledge, strategic and operational capacity of key implementing institutions, including, inter alia, the Project Manager, the Strategic Partners, the Project Auditors and the Cooperating Entities.

41.The subcomponent will strengthen public institutional capacity, including staff training and capacity building and improvement of technical services delivery aimed at rural population in most climate affected areas. The subcomponent will focus on consolidating the coordination of sectorial agencies, relevant to the implementation of the State's programs and policies supported under the Project[27] and enable better sustainability of policies and programs post-Bank support. Given the strategic role of SDA, EMATERCE CAGEGE, SOHIDRA and SISAR (Strategic Partners), Agropolos Institute (Project Manager), and the State Auditing Court (TCE) and the State General Controller and Ombudsman (CGE) (Project Auditors) in the implementation of Components 1 and 2, the Project will support key activities to strengthen these agencies' strategic and operational capacity, especially for planning for climate adaptation and mitigation by building on the project activities. Activities may include, inter alia: consolidation of the SDA's management system; restructuring and strengthening of UGP and EMARTECE; piloting of a management scheme for sludge management and the implementation of multi-community solar panel schemes to support water pumping [28]. In addition, other partner institutions such as FUNCEME, COGERH, IPECE, and Secretariat of Cities (Cooperating Entities) will also develop key activities and/or share knowledge of the sector to improve rural resilience and sustainability.

42. **Subcomponent 3.2. Project Management and Supervision (US$18.37 million; IBRD loan US$12.16 million).** The subcomponent will support overall Project management, coordination and implementation, including inter alia: (i) inter-institutional coordination; (ii) activity monitoring, evaluation and impact assessment; (iii) fiduciary administration, internal controls and audits; (iv) environmental and social safeguards management and implementation; (v) a citizen's engagement and grievance redress mechanisms; (vi) studies and pilots supporting Productive Subprojects and Investment Subprojects; and (vii) communication and outreach strategy.

Other Design Aspects

[27] Including climate adaptation
[28] Piloting the sludge management scheme and the solar panel multi-community schemes cost add up to around USD 1.63 million.

43.**Gender Strategy**. Through its targeting of beneficiaries, institutional strengthening activities, and farm level interventions, the Project will ensure equitable opportunities for women family farmers. The project's gender strategy is organized in three main axes: (i) Support for the productive inclusion of groups of rural women farmers - which reduce economic gaps. Special incentives for matching grants subprojects that target female farmers, such as additional scores for prioritizing matching investments proposals, will be in place; (ii) Improving access to water and onsite sanitation - reducing gaps in health and time used in domestic activities; (iii) Gender sensitization - which reduces gender-based violence and allows an environment for economic improvement, health, time use and women's participation. The project's gender strategy also seeks to address gender-based violence and the Project will carry out activities aimed at preventing and combating different forms of violence against women**.** The detailed Gender Strategy is archived in the project document files and will be incorporated in the POM.

44.**Youth Strategy.** The project will pay special attention to rural youth. They will be the priority beneficiaries for professional training activities, mainly to occupy roles in the management of supported producer and community organizations. The strategy for youth consists in carrying out professional training in three modules. The first module will support young people to develop their skills of associativism and cooperativism. The second module will develop management skills and technological innovation for organizational strengthening and management, and the third module will develop entrepreneurship and marketing skills. Following the trainings, the Project will also support entrepreneurship proposals presented by young people with a combination of technical assistance and micro credits or grants. The design of the strategy will be compatible with the investments made so that the young people are integrated into the activities carried out in their communities and with families to ensure support for young people and facilitate family succession.

C. Project Summary Cost and Financing.

45. Total project cost (including all price and physical contingencies) is estimated at US$153.53 million, comprising an IBRD loan of US$100 million and a local counterpart contribution of about US$53.53 million (in cash, US$50 million from the State government and the remaining US$3.53 million from Project beneficiaries). The financing by component and subcomponent is presented in Table 1.

Table 1: Summary Project Cost and Financing (US$ Million)

Components/Subcomponents	Total	Financing Sources	
		IBRD Loan	Counterpart Funding
Component 1: Sustainable Economic Inclusion	**68.79**	**43.54**	**25.25**
1.1. Strengthening Organizations for Enhanced Market Access	60.24	37.88	22.36
1.2. Social and Productive Inclusion of Vulnerable Groups	8.55	5.65	2.89
Component 2: Rural Water Supply and Sanitation Access	**53.09**	**35.35**	**17.73**
2.1. Expanding Water and Sanitation Access	49.13	32.72	16.41
2.2. Increasing Water Security and Resilience	3.96	2.64	1.32
Component 3: Institutional Strengthening and Project Management	**31.41**	**20.86**	**10.56**
3.1. Institutional Strengthening and Capacity Building	13.04	8.69	4.35
3.2. Project Management and Supervision	18.37	12.16	6.21
Front-End-Fee	0.25	0.25	--
TOTAL PROJECT COSTS	**153.53**	**100.00**	**53.53**

Note*:* Exchange rate used for planning purpose was US$ 1 = BRL 3.7 based on average projection for 2019 carried out by the Brazilian National Central Bank.

46.**Retroactive financing** will be allowed for all components of this Project up to an aggregate amount not to exceed US$ 20,000,000 for expenditures made up to 12 months before the signing date of the loan agreement and for eligible expenditures incurred no earlier than January 1st, 2019.

D. Project Beneficiaries

47.**Component 1.** The general definition of key direct beneficiaries is the group comprising family farmers' households and smallholder producers organized in different forms of Producers' Organizations (PO, such as community associations, cooperatives, producers' associations, vulnerable groups, youth groups, etc.) and people receiving training by the component (see further details in Annex 2). The component is expected to benefit directly around 13,000 households, including: 11,750 households participating in the implementation of about 390 Productive Subprojects; and about 1,250 households participating in the implementation of Investments Subprojects for vulnerable groups (indigenous peoples, Q*uilombolas*, women and youth, as well as other groups). Women and young people are priority beneficiaries, especially in training activities and will account to around 20 percent of total beneficiaries.

48.**Component 2**. Direct beneficiaries consist of the rural population directly benefiting from improved access to water and onsite sanitation infrastructure investments. Specific eligibility criteria per type of investments has been based on the expected demands under each subcomponent (See Annex 2 for more details, including prioritization criteria within each eligible group). Beneficiary population would include the ones who live in areas that: (i) the Municipal Alert Index (*Índice Municipal de Alerta – IMA*) is in the "High" and "Medium High" bands; (ii) the Municipality approves that the works are carried out; (iii) the SISAR's legal framework is in place (including community membership in the management of SISAR and the City Hall); (iv) there are availability of water sources; and (v) proposed subprojects would contemplate the universalization of the water supply in the localities. The component is expected to directly benefit up to 25,000 households (94,500 beneficiaries) with water supply systems for human consumption (including around 2,400 family farmers from component 1), including implementation of sanitary kits (MSD) to around 5,850 of these households. In addition, it will directly benefit a portion of the family farmers of Component 1 by supporting the implementation of gray water reuse infrastructure for production in 200 family farms. Women and young people will also be priority beneficiaries, especially in training activities for operation and management of water systems.

49.**Component 3.** Direct beneficiaries include staff to be directly benefiting from capacity building activities geared towards public institutional strengthening.

50.Finally, indirect beneficiaries include: (i) private agribusiness enterprises and government entities who may enter into partnerships with producers/farmers organizations; and (ii) the entities that may participate in and manage state-wide services promoted by the Project. Special efforts will be made to ensure women, youth, *Quilombol*as, and Indigenous groups are adequately informed of project procedures and benefits to promote their participation. No identifiable group will be negatively affected by project activities.

E. Results Chain

51.The Theory of Change for the Project is summarized in the diagram on the next page.

Country/Sector Constraints	Activities Proposed	Outputs Expected	Outcomes (PDO)	Long Term Impacts
- Lack of productivity growth in rural areas; - Large number of family farmers with limited organizational capacity; - Lack of adequate knowledge and know-how in business skills and marketing abilities; - Limited sectoral ability to respond to dynamic market demands; - Low access to sources of capital/adequate financial services; - Low capacity to manage climate change and weather risks; - Scarce availability of water resources; - High vulnerability of natural resources to climate conditions and adverse weather; - Limited access to new/modern technologies; - Insufficient access to water and sanitation services; - Limited public-sector capacity to provide effective services.	**Component 1: Sustainable Economic Inclusion.** - Promote/strengthen organizations and their managerial/technical capacities; - Define priority territories, based on potentials and levels of vulnerability; - Identify competitiveness and market opportunities; - Elaboration of business plans and subprojects inserted in key value chains; - Provide matching grants to selected subprojects with clear market access potential, to increase production competitiveness and market linkages; - Promote generation and adoption of climate resilient technologies to enhance sustainability. **Component 2: Rural Water/Sanitation Access.** - Identify viable/sustainable water sources; - Prepare and implement water services subprojects, using new technologies and water sources, to expand basic water services to rural population; - Provide technical and managerial support services, enhancing coordination and institutional capacity; **Component 3: Institutional Strengthening and Project Management.** - Support strategic restructuring and capacity building of SDA and key partner institutions (e.g., EMATERCE, CAGECE, SOHIDRA); - Enhance SISAR's O&M capacity; - Enhance project implementation through operational agreements with key partners (e.g. FUNCEME, COGERH, IPECE, SEBRAE); - Increase RWSS knowledge by supporting the collection of SIASAR data; - Provide technical assistance and training to enhance efficiency in service delivery; - Strengthen management and coordination capacity of SDA/UGP.	**Sustainable Economic Inclusion.** • Increased number of Producers' Organizations of family farmers, including women and youth, implementing sustainable subprojects, with enhanced capacity to respond to market demands; • Innovative technologies adopted, leading to increased competitiveness and enhanced climate resilience; • Organizations with enhance capacity to access demanding markets, leading to increased sales and revenues; • Organizations' enhance capacity to access formal sources of financing; • Natural resources management plans implemented; • Enhanced capacity for managing climate change risks and reduce vulnerability to weather events. **Rural Water and sanitation Access**. • Improved rural water/sanitation infrastructure; • Water systems operating under efficient O&M schemes; • Beneficiaries and staff trained; • Enhanced capacity of rural population to coexist with conditions in the semi-arid *Sertão* region. **Institutional Strengthening**. • Public sector agencies with enhanced capacity to provide water services and with capacity to meet evolving industry standards; • Technical services available to rural population improved. • Better coordination and availability of sector knowledge.	- Family agriculture strengthened, with sustainable competitive activities carried out and increased incomes; - Producers organizations with increased skills on business management and strong linkages with markets; - Rural population with increased access to improved water and sanitation; - Strengthened public institutions providing services. - Gender gap is reduced; - Increased rural employment. **CRITICAL ASSUMPTIONS** - Rural producers and family farmers (including women/youth) can implement investment subproject to gain access to dynamic and evolving markets; - Beneficiary organizations meet counterpart funding requirements; - Producers organizations are willing to participate in key value chains in the selected priority territories; - Concrete market demand for products from supported rural enterprises are formalized in marketing agreements; - Beneficiary enterprises/organizations improved their organizational and managerial capacities and adopt adequate technologies; - There is an effective coordination and collaboration between public agencies for efficient implementation and a continued political commitment to the project; - Right technologies/inputs are available to adopt technologies for improving productivity and mitigating vulnerability to climate change; - Adequate technical assistance is efficiently provided to beneficiary organizations (quality and timing); - Legal/regulatory framework continues to improve providing support to capital investment and business development.	More prosperous, inclusive and climate-resilient rural economy and improved human development conditions for the rural population.

F. Rationale for Bank Involvement and Role of Partners

52.The World Bank's long-standing engagement through a series of loans under the Northeast Rural Poverty Reduction Program (1993-2010) and the São José Program (2002 to present), places it in a unique position to share key lessons learned in areas of rural development, poverty reduction, climate resilience, sustainable water services provision, decentralization and participatory methodologies. Furthermore, the Bank´s recent experience in the implementation of rural productive alliances projects in Latin America[29], as well as for development and usage of agro-climatic information systems, would be instrumental to support this operation. The Bank's experience in the water sector can scale up innovative approaches already piloted during the previous operation[30] (reuse, use of solar panels, sludge management, etc.) and bring in innovative approaches to further improve the sustainability and planning of service provision (e.g. SIASAR, behavior change techniques). The Bank will provide technical and strategic knowledge transfer through the participation of its specialists and ad-hoc external specialists in project implementation and evaluation, promoting knowledge exchanges and capacity building events, and sharing best practices in monitoring and evaluation (M&E).

53. The operation and maintenance scheme for water service provision in Ceará (with SISAR) has been showcased in several fora. The Borrower has participated in knowledge exchange events (e.g. Bolivia, Panamá, etc.); and has received delegations from India, Nicaragua, among others, in addition to Brazilian states (Pernambuco, Bahia, Piauí, etc.). The SISAR experience was also studied by the Bank in three flagship pieces[31], where the assessed results indicate the it is a cutting-edge experience worth sharing worldwide. Strengthening the model even further and bringing in innovate approaches to the scheme will create lessons and opportunities worth sharing in Brazil and elsewhere.

54.This Project will not have external co-financiers or international partners. However, it would rely on an extensive network of public and private institutions and organizations (both national and state entities), that will be contributing with their own skills and experiences under a strong and tightly coordinated framework, collaborating towards ensuring the achievement of the intended project outcomes. For instance, the German Development Bank – KfW (*Kreditanstalt für Wiederaufbau*) is supporting the State with RWSS activities in specific municipalities of the State[32]. Lessons learned from Sao Jose III Project were already integrated into KfW-supported project design (e.g. support to the SIASAR, implementation of household sanitary kits, and solar panels, etc.); and the proposed operation has also incorporated improvements developed during the preparation of the KfW-supported Project (e.g. legal framework agreements with the municipality to have the works carried out and SISAR to operate the systems). Coordination efforts between the two institutions are expected to be continued during implementation.

G. Lessons Learned and Reflected in the Project Design

55. The proposed Project design draws valuable lessons from the previous project in Ceará[33] and other recently closed agriculture operations in Brazil [34], as well as general World Bank's key agriculture and water sector analytical work in Brazil and Latin America (Linking Farmers to Markets through Productive Alliances, 2016 and other RWSS-related documents[35]).

[29] Linking Farmers to Markets through Productive Alliances: An Assessment of the World Bank Experience in Latin America". The World Bank, 2016.
[30] Ceara Rural Sustainable Development and Competitiveness (P121167)
[31] Banco Mundial. Estudo de modelos de gestão de serviços de abastecimento de água no meio rural no Brasil – 1ª Edição – Parte I, maio 2016; Banco Mundial. Sustainability Assessment of Rural Water Service Delivery Models. Findings of a Multi Country Review. Agosto 2017; and World Bank. Joining forces for better services? June 2017.
[32] Águas do Sertão Project.
[33] The Ceará Rural Sustainable Development and Competitiveness Project – Sao Jose III (P121167).
[34] The ICR for the Santa Catarina Rural Competitiveness Project, 2017 (Report No: ICR 4054).
[35] Brazil Policy Note on Rural Water Supply and Sanitation 2018; Banco Mundial. Estudo de modelos de gestão de serviços de abastecimento de água no meio rural no Brasil. 1ª Edição Parte I, maio 2016; Banco Mundial. Sustainability Assessment of Rural Water Service Delivery Models. Findings of a Multi Country Review. 2011.

The main lessons to guide the design of the proposed operation are as follow:

(a) **Differentiated lines of support for organizations of competitive family farmers and more vulnerable groups.** Previous experiences have shown that not all smallholders receiving "productive" support (matching grants and technical assistance) are able to realize increased sales or able to reach demanding markets, and a large proportion of them are not able to integrate successfully into these demanding value chains. At the same time, these smallholders tend to be highly vulnerable to climate variability. Designs of newer operations will need to consider different types of beneficiaries, such as potentially competitive producer groups that could perform in demanding markets and special groups that require more work to enhance their organizational skills and management.

(b) **Market-orientation.** Previous experiences show the importance of prior identification of markets based on formal contacts and pre-negotiations to adjusting production systems accordingly. Supported by specialized technical assistance to the PO, the Project will require the demonstration of pre-defined markets as one of the eligibility criteria for selecting business initiatives.

(c) **Water availability for agricultural production.** Enhanced linkages between productive investments for market access and investments to improve water investments are an essential feature in project design. Although meeting water demand for human consumption is an important objective to increasing well-being of the rural population, it is necessary to strengthen the coordination between different activities to attempt to also provide water for agricultural productive use in the same community (when possible). Another related lesson (mainly from the ongoing *Sao Jose III Project*) is the importance of considering expanded efforts to try to scale up the reuse of grey water for productive purposes, as well as exploring other sources of water when technically and financially viable.

(d) **Quality of business plans and subprojects.** Adequate capacity for preparation/ex-ante evaluation of business proposals, as well as for supporting subproject implementation, is not easily accomplished in development projects assisting small rural households. Governmental agencies and related public institutions, as well as alternatives sources of technical assistance, should be considered (e.g. hiring of an external entity) to provide an independent assessment of each business plan proposal prior to approving financing. Also, specialized consultants could provide assistance and institutional building in the implementation of the subprojects.

(e) **Increased vulnerability to climate change.** Given the impacts of climate change in the entire Northeast Region of Brazil and the predicted tendencies in terms of changing rainfall and temperature patterns, it is considered imperative to incorporate specific measures and investments to contribute to the adoption of adequate technologies and management practices to help enhance the capacity to mitigate these climate risks. These aspects would be part of the set of criteria for selection of priority areas for project implementation, as well as for the selection of business plans and subproject proposals.

(f) **Business training and assistance to beneficiaries.** Building capacities for business management among project beneficiaries is a key element for organizational consolidation and growth. This would be addressed at three levels by: providing general training and awareness raising to potential beneficiaries; helping interested producer organizations to develop business initiatives; and by providing continued and customized assistance and training to participating organizations in business organizations and management. Young people would be a priority audience to reduce rural exodus and ensure family succession in productive organizations.

(g) **Sectoral Coordination.** The primary focus of productive investments for market access is to assist producer organizations and their members through technical assistance and financial provision to increase their competitiveness and market access. Essential sectoral institutions should have some responsibilities in the implementation of projects. Their participation would be decided on careful assessments of their institutional

capacity and, based on the conclusions, complemented by the design of appropriate institutional building efforts to increase their performances.

(h) **Sustainability of water supply investments.** Considering the experience under the ongoing São José III Project, it is clear that alternative technical solutions that will not incur higher costs for operation are needed. New operations should be particularly careful in the review of the feasibility studies, especially in terms of sustainability of water sources, and the engineering design of new investments in water systems for improving efficiency and lowering costs (e.g. using solar panels). The social outreach and capacity building of communities for operational management and maintenance during and after execution of the works will continue to be further strengthened in order to guarantee the community's commitment and engagement to follow the SISAR scheme.

(i) **Prioritization criteria for basic sanitation investments and long-term sustainability.** The São José III Project financed the implementation of more than 9,000 household sanitary kits with the goal of assisting 39,200 inhabitants. Beneficiaries evaluation indicated that 62 percent of the sampled population reported problems related to faulty construction and incorrect use of the MSDs by the families. The proposed Project will strengthen supervision of the works to guarantee the good quality of the construction, complemented with capacity building, training, behavior change techniques and education for users. A new scheme for managing sludge will be explored. And, more on international experiences for improving behavior change for sanitation will be tested, with support from GWSP[36].

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

56. The project will be implemented by the Secretariat of Agrarian Development (*Secretaria Estadual de Desenvolvimento Agrário, SDA*), through the Project Management Unit (*Unidade de Gerenciamento de Projeto - UGP*), already established for the previous São José III Project. UGP will continue to be responsible for the overall management, planning, coordination, monitoring and evaluation of all project activities, both at the central and field levels, as well as for project financial management, procurement, disbursements and accounting. UGP will also be responsible for implementing the social and environmental safeguards instruments, and for disseminating project results through a proactive communication strategy.

57. SDA/UGP will continue to provide overall project implementation support, as established under the Sao Jose III Project with: (i) the Agropolos Institute of Ceará (Agropolos) through an Implementation Agreement; and (ii) the State General Controller and Ombudsman (*Controladoria e Ouvidoria Geral do Estado do Ceará* – CGE) in addition to the already engaged State Auditing Court (*Tribunal de Contas do Estado do Ceará – TCE*) through specific Auditing Agreements. Under the Project, Agropolos will provide technical cooperation and support to project management, implementation and capacity building to central and field-related activities. TCE will carry out external auditing of annual financial statements and CGE will be responsible for the internal auditing compliance-related functions and the internal control environment as well as for auditing the contracts implemented by TCE. During project preparation, the institutions technical and fiduciary capacities were reassessed and found in compliance to meet the implementation needs and with Bank's procedures.

58.SDA/UGP will also partner with several State institutions, such as EMATERCE, CAGECE, SOHIDRA, SISAR, FUNCEME,

[36] Global Water Security and Sanitation Partnership (GWSP). Trust funded activity for "Water Security and Sanitation Program in Latin America (P166212).

COGERH, Secretariat of Cities, and IPECE for project implementation, M&E and impact evaluation, through Cooperation Agreements to formalize responsibilities regarding project actions. Their roles, as well as the detailed implementation arrangements, are described in Annex 1. Cooperation Agreements to be signed with these partners, acceptable to the Bank, should be available shortly after effectiveness.

59. A Steering Committee, chaired by SDA, will be established to improve the inter-institutional coordination with other State Secretariats, co-implementers and partner institutions and dialogue with State Planning and Finance Secretariats to ensure that counterpart resources are allocated in the State's budget. Key managerial and technical staff will be formally appointed as to be fully operational immediately after Project effectiveness in accordance with detailed profiles and Terms of Reference as included in the Project Operational Manual (POM).

60. Producer and community organizations will be responsible for implementing the selected investment proposals under Component 1 through Matching Grants Contracts to be signed, with the support and supervision of the SDA/UGP and partners. For Component 2, SDA/UGP will be responsible for carrying out project activities to benefit community organizations with support from CAGECE, SOHIDRA and SISAR.

61. SDA/UGP will also convene an annual multi-stakeholder meeting (consultative forum) to include civil society, agri-business organizations, academics, indigenous peoples, project beneficiaries, municipalities, government institutions, and other concerned parties, to openly discuss and receive feedback and advice regarding project strategy and progress, as part of the citizen engagement strategy. The proceedings of each of these annual meetings will be submitted to the Bank for information.

B. Results Monitoring and Evaluation Arrangements

62. The SDA/UGP will have overall responsibility for project data collection, monitoring and evaluation (M&E). The M&E responsibilities include tracking of the indicators' progress at the end of each semester (biannually), as well as tracking results at the technical, financial, social and environmental levels. The SDA/UGP will coordinate the data collection and consolidation in collaboration with EMATERCE, CAGECE, IPECE, SOHIDRA, SISAR, other partners as needed and private sector service providers. Project monitoring will be based on the Results Framework, using the definition and measurement methodology provided for each indicator. The Results Framework Indicators would be contained within a specific module in the existing computerized management information system (SIGPRO) to systematically monitor the physical implementation progress, as well as beneficiaries reached by the project. For this purpose, a comprehensive digital registry of beneficiaries will be developed and integrated as part of the module, as explained in the detail in the POM.

63. The Project baseline will be carried out after the Territorial Prioritization study by municipalities (to define the geographical scope of the interventions) has been completed and subprojects and beneficiaries are selected for funding, but before resources are allocated or training is provided. As part of this exercise, specific gender gaps[37] baselines under components 1 and 2 will be verified and adjusted accordingly. Early establishment of the baseline (in the case of impact evaluation) and of a registry of beneficiaries (in the case of monitoring) is of paramount importance for tracking project results and impacts.

64. Biannually field implementation reviews will be undertaken by the Bank to assess the physical and financial progress

[37] These include the income gap between men and women in rural areas and the time-use differences at the household level, including the weekly hours spent fetching water. An indicative baseline supported by available data has been included as part of the proposed indicators.

and performance based on the Annual Work Plan and Budget (AWPB), and address issues and constraints in implementation and management. SDA/UGP, in collaboration with key partners, will prepare Semester Progress Reports. Each report will cover a six-month period and must be presented to the Bank within the agreed frequency, usually in time for the implementation support missions. A Citizen Involvement Survey will be applied by the SDA/UGP to measure access, transparency, ownership and accountability, as well as satisfaction. The results of that survey should be reflected in the Results Framework. Similarly, SDA/UGP will put in place a Grievance Redress Mechanism (GRM) to register, track and answer beneficiaries' complaints and project-affected people, which should be also reflected the Results Framework.

65.SDA/UGP will carry out (with consultants) a technical assessment review at the time of the project Mid-term Review (MTR), due to occur when loan disbursement levels reach approximately 50 percent of total Loan proceeds or when half of the execution period has elapsed, whichever occurs first. SDA/UGP must send a proposal for Terms of Reference for the MTR technical review to the Bank for its no objection. This review will analyze progress towards results and the likelihood of achieving the PDO, as well as the level of beneficiaries' satisfaction (based on a specific survey). Results will have to be available early enough to be used at the MTR mission, therefore allowing for technical or design adjustments, if warranted.

66.SDA/UGP will also conduct a final evaluation under Terms of Reference agreed with the Bank. The final evaluation will commence when more than 90 percent of the resources of the loan have been disbursed or around six months prior to the project closing date (as revised), whichever comes first. The evaluation strategy will consider differences in the state of knowledge as well as data generation capabilities in the supported interventions. UGP will also collect information for relevant inputs and results, including the baseline and measurements after investments, to assess effectiveness and efficiency while controlling for other factors that might change over time. In both cases, the analysis will consider socio-economic variables, including gender and ethnicity and the overall level of beneficiaries' satisfaction with the Project.

67.An impact evaluation will be carried out to establish causal relations between project interventions and a set of outcome variables. At least three types of subprojects will be selected for impact evaluation, in which a clear and specific methodology can be applied (e.g. matching methods with differences-in-differences, instrumental variables, etc.) and in which the variables of interest can demonstrate changes during the implementation period. SDA/UGP with technical oversight of IPECE, will hire an independent third party specialized in impact evaluation to develop and propose the methodological designs, data collection tools and implementation strategies for the evaluation of the three proposed interventions. A specialized firm will also be recruited for field data collection. The key variables to be assessed will be agricultural total sales value and volume, adoption of sustainable and CSA technologies, practices and level of market access, and hydro-environmental supply systems. The evaluation will help to single out the influence of external factors (e.g. international market prices and climate impacts) that are not attributable to the Project. The analysis will be disaggregated by gender, age group and ethnicity wherever necessary.

C. Sustainability

68.The sustainability of productive investments will be improved through rigorous design and independent assessment of technical, financial and social/environmental safeguards viability. Based on lessons from previous projects, productive subprojects will be designed with a greater emphasis on improving on-farm climate resilience, market access and O&M of overall financed investments and businesses. Subprojects will support incorporation of climate smart agricultural related technologies and practices, based on the assessments of on-farm agro-climatic vulnerabilities at the pre-investment stage. To improve market access, each subproject proposal will be assessed to identify POs commercial constraints and potential market outlets. Long-term sustainability will rely on human capital formation (adequate capacity building and technical

assistance provision) and tailored O&M procedures (working capital, capital cost, maintenance of infrastructure and equipment, administration, etc.).

69.Sustainability of water supply systems and sanitation investments will be improved by rigorous ex-ante evaluation of water sources availability and technical alternatives, implementation of a sludge management scheme, as well as institutional strengthening of community organizations and SISAR for management and O&M. Long-term sustainability will be improved by contributing to strengthening the statewide institutional and policy framework that supports rural water and sanitation services, through a greater coordination between SDA and partnered institutions, especially the Secretariat of Cities.

70.On the institutional side, the project will help strengthen the strategical and operational capacities of the State's rural technical assistance and extension system and of EMATERCE. Finally, the use of the State Fund for Family Agriculture Development (FEDAF, in Portuguese), which is the mechanism to be use for direct disbursements to beneficiaries, will allow for continuity of the State's program after project completion.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical Analysis.

71.**Rationale for public sector financing**. Small-scale agriculture and community organizations in the rural space usually show low levels of productivity, limited added value, and questionable sustainability, operating in a context marked by under-provision of effective rural extension and other non-financial services, as well as limited access to financing. This rural space is where integration to dynamic markets has been hampered by weak organizational and business management capacities, information asymmetries, and diseconomies of scale. Public sector capital transfers to co-finance private ventures of organized small-scale rural producers and service providers, coupled with provision of technical assistance and organizational and business development support are justified based on overcoming these market failures that have prevented this segment of the rural economy from successfully integrating into dynamic and more profitable markets.

72.**Technical Quality of Subprojects**. The technical quality of the business plans and subproject proposals will be ensured by (i) assisting applicants during the preparation of business plans and the following investment subproject to ensure that they are technically and financially viable, environmentally and socially sustainable and climate-resilient before being considered for selection; (ii) including training and technical assistance needs as part of the business or implementation plans; (iii) providing for independent evaluation with private sector representatives participating in final subproject selection; and (iv) having in place a M&E system that will allow feedback to inform future rounds of call for proposals and subproject applications.

73.**Water and Sanitation Investments.** The Project's activities are tightly aligned with the overall goal to ensure quality services in a sustainable environment and were agreed upon and selected based on their relevance to the PDO and higher-level objectives. They especially focus on reaching vulnerable people with improved water and sanitation access and in bringing tools and innovative technologies to significant contribute to water resilience. Innovative approaches and technologies—targeting relevant issues that most of the RWSS sector face in Brazil—were also highly considered during preparation and are expected to be further explored and enhanced during project implementation. Costs for the works interventions were assessed based on the ongoing experiences in the State with similar contracts and/or of similar

complexity of the areas for interventions. International benchmarks were also considered, as well as Brazilian local market references.

Economic and Financial Analysis.

74. The project is expected to generate substantial net incremental benefits for farmers, rural entrepreneurs and communities, including vulnerable priority groups, in the project areas. Benefits will directly accrue to farmers, women, youth, indigenous people and rural dwellers. Benefits will accrue from: (i) increased water availability for both human consumption and productive use; (ii) reduction in the prevalence of water-borne and water related diseases through improved access to water supply systems, and sanitation; (iii) diversification of productive activities and sources of income; (iv) increased crop and livestock productivity due to improved husbandry practices and better nutrition; (v) enhanced processing efficiency and improved quality of processed products, thus attracting higher prices; (vi) increased employment either for hired or family labor, for both on-farm and off-farm activities; (vii) tax revenues as a result of increased volume of taxable production; and (viii) climate mitigation benefits.

75. **Regarding Component 1,** SDA/UGP has pre-identified strategic productive chains, based on the experience of the Sao Jose III Project, and provided real-case enterprise models (business plans). These include (a) fruticulture (guava, acerola, caja, graviola, mango, passion fruit), produced fresh and for pulp; (b) cassava for flour or fresh (to be fried); (c) apiculture and honey production; (d) cashew nut production and processing; (e) cow milk; and (f) goat and/or sheep milk and meat.

76. A cash-flow analysis to present the "with" and "without" scenario analysis was conducted for each one of these models. Key-indicators used are Net Present Value (NPV), Financial and Economic Internal Rate of Return (FIRR), Benefit-cost ratio (B/C ratio) and switching values for both benefits and costs. These models generate on average Financial Internal Rates of Return (IRR) of 26 percent under the "with project" scenario, and B/C ratio of 1.42, with significant incremental NPV/farmer of BRL 55,635 or US$ 14,641. The sensitivity analysis in indicates average Switching Values (SV) of 42 percent for costs and -28 percent for benefits.

77. **Regarding Component 2,** the analysis is based on cases drawn from other projects in Brazil and Ceará. Accounted costs included the initial investment and annual operating costs, while the benefits were calculated based on a reduction of the prevalence of waterborne and water-related diseases, based on burden of disease and Disability-Adjusted Life Year methodology.

78. **The economic analysis** shows that the project is an economically viable investment for the economy. The Project economic NPV of the net benefit stream, discounted at 10 percent, is BRL 62.37 million (USD 16.41 million) producing an EIRR of 14 percent for the base case scenario.

79. **Greenhouse gas (GHG) analysis.** Following the most recent World Bank guidelines[38], the project's economic analysis indicators were estimated using a higher carbon price (HCP) assumption and a lower carbon price (LCP) assumption to estimate economic benefits from reducing GHG. Under the HCP scenario, the economic rate of return (ERR) for the entire Project is 26 percent and the net present value (NPV) is approximately US$ 63 million. Under the LCP scenario, the ERR is 20 percent and the NPV is approximately US$ 40 million.

[38] Guidance note on shadow price of carbon in economic analysis. World Bank, September 2017

80. **Sensitivity analysis.** The robustness of these indicators was tested and confirmed with a sensitivity analysis that resulted in a switching value for cost increments of 92 percent, 58 percent and 24 percent under the HCP, LCP and baseline scenarios, respectively, and of 48 percent, 37 percent and 19 percent for reductions to economic benefits under the HCP, LCP and baseline scenarios, respectively. These indicators strongly suggest that the Project represents a worthwhile investment for the state.

81.The detailed Economic and Financial Analysis is archived in the Technical Annex to this PAD and the Project files.

B. Fiduciary

Financial Management

82.The Financial Management Assessment (FMA) was carried out for the proposed project in accordance with *Bank Policy: Investment Project Financing and Bank Directive: Investment Project Financing* and the *Financial Management Manual for World Bank-Financed Investment Operations (effective March 1, 2010 and revised February 10, 2017)* to determine whether SDA has acceptable Financial Management (FM) arrangements in place to adequately control, manage, account for and report on Project funds. The arrangements include the entity's system of planning and budgeting, accounting, internal controls, funds flow, financial reporting, and auditing. The conclusion of the FMA is that: (i) SDA has sufficient capacity to fulfill its FM responsibilities; (ii) the FM arrangements for the proposed Project are considered adequate; (iii) the flow of funds, disbursements, monitoring, auditing and supervision arrangements have been designed in a way to respond to the Project's implementation arrangements, and (iv) the residual FM risk associated with the Project is rated as **Substantial**. Based on this assessment, there are no FM-related conditions for negotiations, Board approval and/or effectiveness.

83.The FMA identified the following risks to the achievement of the Project Development Objective: (i) delay in the execution and documenting the use of funds by the community association sub-projects and providing respective supporting documentation; and (ii) delays by Agropolos in implementing agreed activities to improve institution administrative and fiduciary management capacity and processes. These risks and corresponding mitigation measures are covered in greater detail in section V.

Procurement

84.All procurements under the Project will be carried out in compliance with the applicable World Bank procurement guidelines and procurement policies for Investment Project Financing (Procurement Regulations for IPF Borrowers, issued on July 2016, revised on November 2017 and August 2018 - "Procurement Regulations"). Procurement arrangements shall be in line with all major aspects of the operation and they shall observe features and context described in the *Project Procurement Strategy for Development (PPSD document)* prepared by the Recipient with full support from the Bank's team and presented in Annex 3 of this PAD (to be submitted to Bank's approval before negotiations). Procurement planning for the proposed Project shall follow provisions outlined in paragraph 5.9 of the above mentioned "Procurement Regulations" and the Bank's Systematic Tracking and Exchanges in Procurement (STEP) system will be used to prepare, clear and update Procurement Plans and conduct all procurement transactions for the Project.

85.The overall Procurement Risk established for this operation is **Substantial**. This rating is rooted in a procurement capacity assessment carried out of the proposed Implementing and Co-implementing Agencies (SDA and Instituto Agropolos, respectively). The assessment reviewed the IAs' organizational structures and the current operation environment for implementing procurement transactions expected by the project. Most of the issues/risks concerning

the procurement function for implementation of the project have been identified and include: (a) weakness in the capacity of the administrative staff to carry out procurement transactions under the Bank's regulations and procedures; (b) lack of experience in applying the Bank's new Procurement Framework, as well as in preparing the required *Project Procurement Strategy for Development*. The Bank's procurement team will maintain a continuous dialogue with the UGP's procurement team to avoid any delay in the procurement process due to a misunderstanding of the application of all procedures required by Bank's procurement framework, mainly those described in the Procurement Regulations for IPF Borrowers.

86. Mitigation measures were proposed given the inherent risks ion procurement. These measures are further detailed in the Executive Summary extracted from the Project Procurement Strategy for Development (PPSD) as described in Annex 3: Fiduciary Aspects (Financial Management and Procurement). Most of the mitigation measures fall within the realm of the Client's actions, but the Bank's team will monitor and propose additional mitigation measures if needed. The Client should submit an action plan for the Bank's review, noting its plan to put in place all proposed mitigation measures for this operation.

87. The calculated risk for Implementing and Co-implementing Agencies (SDA and Instituto Agropolos, respectively) is rated as **Substantial**. The set of factors considered in this assessment also took into account the limited experience of the implementing agencies in conducting procurement transactions based on Bank's new procurement policy. Some factors require special attention from the Client and from the Bank's team due to their high probability and severity of occurrence as per assessment result, include (i) Internal Manuals and Clarity of the Procurement Process; (ii) Record Keeping & Document Management Systems; and (iii) Contract Management and Administration.

C. Safeguards

Environmental Safeguards

88. Overall, the Project is expected to produce positive environmental impacts. The most significant positive impacts foreseen include improved soil conservation and management, restoration of degraded grazing lands and degraded riparian vegetation (contributing to reducing erosion and desertification), access to water supply for human consumption in rural communities, access to rural sanitation and treatment and reuse of grey water. The Project is also expected to enhance climate change adaptation by: (i) increasing adaptive capacity through water access and reuse in areas vulnerable to droughts as well through financial assistance and capacity building to implement locally adapted production systems; (ii) reducing exposure of communities and systems through conducting proper water-use planning and management and changing of cropping patterns; and (iii) reducing sensitivity by developing or adopting suitable plant and animal varieties, enhancing soil nutrition and on-farm water management. Finally, some climate change mitigation co-benefits are also expected through the reduction and removal of GHG emissions through: (i) improved cropland and grazing management and restoration of Caatinga shrublands and forests and (ii) increasing feed-use efficiency and agricultural waste recycling and reducing deforestation and forest degradation in grazing areas.

89. The Project will not support or lead to the conversion or degradation of natural habitats. In fact, it will help rehabilitate and restore degraded Caatinga lands in areas under livestock management, through the promotion of conservation and sustainable management of Caatinga xeric shrublands and thorn forests (by implementing agro-silvo-pastoral management plans), hence preserving and restoring local biodiversity. The project will also support CSA, following a framework of integrated planning at the ecosystem level that will maintain ecosystem functions and services. For such, tools and methods foreseen under the project include support to sustainable land management and the agro-silvo-pastoral management.

90.**Environment impacts and safeguard policies.** The project is classified as **Category B** given its focus on localized interventions in small-scale agricultural production and rural community water supply and sanitation, thus generating only minor, reversible and localized impacts, preventable through responsive mitigation measures. The Project triggers six environmental safeguard policies: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Pest Management OP/BP 4.09), Physical Cultural Resources (OP 4.11/BP), Forests (OP/BP 4.36) and Safety of Dams (OP/BP 4.37).

91.Despite the low risk and the positive or neutral project impacts anticipated, some investments supported under Components 1 and 2 could potentially have adverse environmental impacts. No significant indirect, long-term, or cumulative impacts are foreseen. The potential negative impacts of any misdirected support for these investments could include soil erosion; water pollution (i.e., discharge of untreated wastes from agro-processing, sediments); and deforestation in small areas where water supply and sanitation schemes will be constructed. Given that the exact location and nature of potential small investments to be financed under Components 1 and 2 had not been determined at the time of appraisal (these will be mostly decided during Project implementation on a demand-driven basis through a process of formulating subproject proposals under Components 1 and 2), specific environmental impacts cannot be ascertained at this time. Therefore, the Borrower has prepared an Environmental and Social Management Framework (ESMF). These processes will ensure conformity with Bank safeguard policies, as each investment will be subject to an EA process to avoid adverse impacts on the local environment and, where relevant, appropriate mitigation measures will be included in their designs.

92.The Bank reviewed and approved the ESMF which was disclosed by the Borrower[39] on February 5 2019 and by the Bank[40] on February 7. 2019. The ESMF ensures that the project has in place an effective instrument that includes: (i) the principles, rules, guidelines and procedures to assess the Project´s environmental and social risks and impacts; (ii) environmental and social screening and evaluation procedures, as well as proposed mitigation measures, that will be built into the management of the financial mechanisms to be adopted to implement subprojects under Components 1 and 2; (iii) adequate information on the area in which subprojects are expected to be sited (to include any potential environmental and social vulnerabilities of the area as well as information on the potential impacts that may occur and mitigation measures that where needed); (iv) provisions for estimating and budgeting the costs of measures and plans to reduce, mitigate and offset adverse risks and impacts; (v) information regarding the SDA's responsibility for addressing project risks and impacts, including the SDA's capacity to manage environmental and social risks and impacts, building on the SDA's existing capacity developed from the ongoing São José III Project - P121167; (vi) the inclusion of procedures for screening any known physical cultural resources in the project areas and 'chance-find' procedures if culturally significant resources are discovered during the proposed project implementation, according to the procedures of OP 4.11 and the Brazilian legislation.

Social Safeguards

93.**Social assessment.** For the purposes of the proposed Project, a full assessment of the environmental and social impacts and benefits of Project activities has been carried out. The ESMF gives special consideration to impacts and benefits for vulnerable social groups. The overall impacts of the project are expected to be positive. The assessment of social impacts and benefits incorporates a gender-sensitive lens and proposes, to the extent needed, specific actions to close identified gender gaps as well as indicators to monitor actions designed to address or narrow these gaps.

[39] Available to the public at *https://www.sda.ce.gov.br/wp-content/uploads/sites/60/2019/02/MGSA_PSJ-IV_Versao_20190128_final_com_Anexo10-1.pdf*
[40] Available to the public at *https://wbdocs.worldbank.org/wbdocs/drl/objectId/090224b08694ced0*

94.**Social Safeguards - OP 4.12 - Involuntary resettlement is triggered.** It is not expected that project implementation would have any physical resettlement or economic displacement. Nonetheless, some investments in productive infrastructures to strengthen value-chains and water supply systems may require land acquisition or voluntary land donation. In consequence, potentially, they may cause adverse effects of physical and economic displacement, although this would be small in scope and locally confined. As site-specific project investments cannot be defined at the preparation stage, the client prepared a Resettlement Policy Framework (RPF) for the project. The Bank reviewed and approved the RPF.

95.**The Project also triggers OP 4.10 - Indigenous Peoples.** As in the current Bank operation (*Sao Jose III* Project - P121167), the Project intends to continue supporting Indigenous Peoples. It is not expected that project implementation would have any negative impact on Indigenous Peoples and, indeed, project activities are intended to benefit them, who are among the most vulnerable groups among the rural poor. As site-specific project investments cannot be defined at the preparation stage, the client prepared an Indigenous Peoples Policy Framework (IPPF).

96.**Social Inclusion and Vulnerable Groups**. The Project will assist vulnerable groups, mainly through Component 1 - Subcomponent 1.2. All the safeguards instruments will take into consideration the risks and impacts on disadvantaged or vulnerable individuals or groups who, because of their age, gender, ethnicity, physical, mental or other disability, social, civic or health status, economic status or other factor, may be more likely to be adversely affected or limited in being able to benefit from the Project.

97.**Gender-based Violence (GBV).** The Gender Based Violence (GBV) Risk Assessment Tool Worksheet was used, which indicated the Moderate Risk for this project (Score of 13.5).[41] The project's gender strategy includes combating gender-based violence**.** The Project will carry out activities aimed at preventing and combating different forms of violence against women**.** A specific module on gender-based violence will be added in the staff training to ensure that all project staff are equipped to prevent, identify, and respond to any reports of GBV during project implementation.

98.**Information Disclosure and Consultation.** Consultations with key stakeholders, beneficiaries and affected persons were carried out by the borrower during the preparation. In addition to an online consultation, two public meetings were held on January 10 and 17, 2019. These consultations were attended by councils and representatives of civil society, nongovernmental organizations, academics and mainly local community leaders, including representatives of indigenous, Q*uilombolas* and traditional communities. These consultations presented the results of the social and environmental assessment, the impacts and benefits derived from the project activities, as well as the proposed measures to avoid, minimize or mitigate adverse impacts. A special round of consultation was held with representatives of Indigenous Peoples to receive their comments on IPPF. The queries were logged, and the feedback received was incorporated into the final ESMF, RPF, and IPPF documents, disclosed[42] by the Borrower on February 5, 2019 upon Bank approval. The Bank disclosed these documents[43] on February 7, 2019.

99.**Citizen engagement.** The citizen engagement strategy already in place under the São José III Project will be continued and improved. Channels for consultation with social movements will be strengthened. These social movements contribute

[41] https://worldbankgroup.sharepoint.com/sites/gsg/SPS/Pages/FocusAreas/GenderBased%20Violence.aspx - "GBV Guidance and Tools" and the "GBV Risk Assessments and Mitigation"

[42] From the Borrower side, ESMF is available at *https://www.sda.ce.gov.br/wp-content/uploads/sites/60/2019/02/MGSA_PSJ-IV_Versao_20190128_final_com_Anexo10-1.pdf*; RPF is available at *https://www.sda.ce.gov.br/wp-content/uploads/sites/60/2019/02/Marco-de-Reassentamento-08_jan_2019-1.pdf*; and IPPF is available at *https://www.sda.ce.gov.br/wp-content/uploads/sites/60/2019/02/MARCO-CONCEITUAL-DOS-POVOS-INDI%CC%81GENAS-1.pdf*

[43] From the Bank side, ESMF is available at *https://wbdocs.worldbank.org/wbdocs/drl/objectId/090224b08694ced0*; RPF is available at *https://wbdocs.worldbank.org/wbdocs/drl/objectId/090224b08694ced1*; and IPPF is available at *https://wbdocs.worldbank.org/wbdocs/drl/objectId/090224b08694ce60*

to disseminate the information about the Project among potential beneficiaries and promote their engagement in Project activities. A proactive communication strategy will explain to local governments, beneficiaries, and the general public the benefits of the Project for various territories and productive chains. Regional meetings will be held for wide dissemination of the Project and its calls of proposals. Clear and transparent criteria for the selection of subprojects will be widely disseminated and applied. Standards of community involvement in the preparation of investment proposals and discussions of local priorities will be established and tracked over time. Direct communication lines between beneficiaries and the Project will be established, aiming to receive feedback and accountability. A grievance redress mechanism will be fully operational and monitored over time by SDA/UGP. Information and Communication Technology – such as regular telephone surveys and a hotline for beneficiaries and Project stakeholders to provide feedback and report concerns – will be regularly used to request and obtain information. Finally, the safeguards officer within the IPU will also carry regular field visits to document complaints raised by the population and to address them adequately.

100. **Labor Influx, Working Conditions and Prevention of Gender-Based Violence.** Risks linked to labor influx are expected to be limited. When civil works are carried out it is expected that most of the workforce will be locally hired. The project will incorporate various measures to mitigate potential negative impacts of labor influx, specifically those related to gender-based violence. These measures will include: i) requiring that Environmental and Social Management Plans (ESMPs) include labor influx management/camp management measures and (ii) ensuring that the contractor's bidding documents (and subsequently in the borrower-contractor's contracts) include: a) mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women; b) informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted; c) introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for non-compliance (e.g., termination), and d) contractors adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence. The Borrower will also ensure that i) complaints about gender-based violence are taken seriously by local law enforcement and ii) any incident or accident involving persons contracted by the Project, directly or indirectly (through contracted companies), must be registered and shared with the Bank. Workers' complaints will be reported to the GRM of the Project and should be monitored until their resolution.

Safeguards Management Performance

101. The Borrower's institutional capacity for safeguard policies is considered adequate. Over the last 15 years, SDA has already developed and implemented three Bank-financed operations with their respective ESMF, including social documents such as an IPPF and RPF. The ESMF procedures for screening, evaluation, approval, and monitoring of subprojects will be incorporated in the project's Operational Manual. Training of key staff from SDA has been provided for under these Bank operations to increase their capacity to implement safeguard policies, and additional training needs were identified during Project preparation. Similarly, the EMSF recommends additional training of staff to support implementation of mitigation measures, which is expected to take place during Project Implementation.

D. Climate Co-Benefits, Greenhouse Gas Emissions Analysis and Disaster Risk Screening.

102. **Climate Co-Benefits.** Since the subprojects under Component 1 will be demand-driven and competitively selected, an ex-ante assessment of expected climate co-benefits cannot be carried out. However, the Project will actively promote and support intensive awareness raising and improved capacities for adaptation to climate change and climate variability (by adoption of climate smart approaches and practices), as well as adoption of innovations and realization of investments, including implementation of natural resources management plans, that are likely to contribute to a reduction in GHG emissions and/or carbon sequestration (see Annex 2 and its Appendix 2). Component 1, however, has an important climate adaptation function as it targets communities that are most heavily hit by climate shocks and provides support for

them to adapt with climate-informed economic opportunities. Under Component 2, the project will contribute to a more efficient and sustainable management of water and sanitation services (including reuse of grey water) as well as to ensure the afforestation/restauration of key areas in watersheds. On the adaptation side, the activities will provide water and sanitation services as well as irrigation to areas most affected by droughts and will build resilient infrastructure. Ultimately, under Component 3, State Institutions will be strengthened and supported to promote climate action through afforestation and ecosystem services restoration in highly vulnerable areas (see further details in Annex 2). On adaptation, the activities will support institutional coordination for this.

103. **Net carbon balance.** A GHG appraisal of the entire set of activities to be carried out under the Project has been carried out using the ex-ante carbon-balance tool (EX-ACT), which quantifies the net carbon balance with regard to tCO_2e, resulting from GHGs emitted or sequestered during the project implementation and capitalization period (20 years) compared to the without-project scenario. The Project leads to estimated annual climate change mitigation benefits of 66,474 tCO_2e, when compared to a business-as-usual baseline scenario. This is equivalent to annually reduced GHG emissions per hectare of 0.2 tCO_2e. After 20 years, GHG mitigation benefits amounting to a reduction of 1,329,478 tCO_2e will be generated. In addition to the achievement of the PDO, the Project also provides intermediate GHG emission reductions as a co-benefit of the project implementation.

104. **Climate and Disaster Risk Screening.** The Climate Risk Screening Report established that exposure to the current and future climate hazards will pose a moderate risk to the project as the project activities have a resilience focus. The main climate hazards are high temperatures, droughts and intensive rains/floods. The proposed interventions are expected to reduce the potential impact of these hazards, particularly in the context of climate change. The implementation of subprojects under Component 1 will increase the beneficiaries' resilience by promoting the adoption of technologies and practices that have proven to reduce risks and contribute to climate change adaptation. Activities under Component 2 will also strengthen livelihoods resilience with improved access, quality, resilience and sustainability of water and sanitation services. The detailed Climate Co-Benefits, Greenhouse Gas Emissions Analysis and Disaster Risk Screening is archived in the project document files.

105. **Grievance Redress Mechanism.** The Project will establish a multilevel feedback and GRM. The Project's GRM will rely on the network of sectorial ombudsman offices and the General Ombudsman Office, which includes a web-based portal (*Ceará Transparente*). The portal allows access to the state network of sectorial ombudsman offices, the General Ombudsman Office of the State of Ceará as well as access to information and social oversight of the implementation of the Multi-Year State Plan (https://Cearátransparente.ce.gov.br/). In addition to this official website, requests of information and grievances can be filed through the phone-hot line (number 155), e-mail (ouvidoria.geral@cge.ce.gov.br), social networks (*https://www.instagram.com/cgeCeará/*; https://twitter.com/cgeCeará; and https://www.facebook.com/cgeCeará) as well as the network of 65 sectorial ombudsman offices. From January to December 2018, 49,776 requests were received by the *Ceará Transparente* portal; 64.1% of these requests were complaints. The average time to answer these requests equaled 12.23 days and 91.6% of them were replied to within the legal period. In addition to these available channels, the implementation agency will designate a focal point for the territories served, who will act on project-related issues and address information requests and grievances. Training will be provided to ensure that the focal points have the capacity to share timely information with beneficiaries about project-funded activities, escalate beneficiary feedback to the project management and other decision makers at the local and central levels, and facilitate resolution of grievances. The structure and processes of these mechanisms – including their scope, receipt procedures, documentation of complaints received, responses provided, and procedures for organizing mediation and conciliation hearings whenever needed – were included in the Project Operational Manual and in the ESMF. The operation of the project's GRM will be periodically reported to the World Bank and monitored according to agreed performance indicators.

106. **World Bank's Grievance Redress Service -** Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service*. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

107. **Monitoring and Evaluation of Citizen Engagement and GRM**. Citizen engagement will be measured through beneficiary feedback surveys and efficiency of the project's Grievance Redress Mechanism. On the one hand, for assessing the outcomes of citizen engagement activities, the Project will carry out beneficiary assessment surveys aimed to measure changes in their level of satisfaction with the activities carried out by the Project. These surveys will measure, but not be limited to (i) the level of satisfaction with technical assistance and investment (Component 1) of water services (Component 2) (disaggregated by gender), (ii) the proportion of households adopting new habits of hygiene, sanitation and rational use of water, and (iii) the percentage of beneficiaries that feel project investments reflected their needs. The information will be collected on a sample basis and analyzed three times during implementation: (i) in the first year of implementation, (ii) in the medium term and (iii) after completion of the investment (productive or water supply system). The project's intermediate results and indicators framework includes an indicator of beneficiary satisfaction, measuring perceptions of service quality from the perspective of its beneficiaries. This indicator will be disaggregated by gender. On the other hand, the efficiency of the GRM will be periodically evaluated in terms of registered grievances satisfactorily responded to in line with the Grievance Redress Mechanism, disaggregated by gender.

V. KEY RISKS

108. The Project's overall risk to achieve the PDO has been defined as **Moderate.** The individual risks are ranked in the Systematic Operations Risk Rating Tool. The highest risks (Substantial and above) include the following:

(a) **Macroeconomic risk is rated Substantial.** The composition of the newly-elected federal and state governments can potentially affect the state policies and the financial, economic and fiscal situation. Since the Federal Government is the guarantor of the operation, a change in fiscal space for new debt may impact the signing of the loan. Under an uncertain fiscal situation, the State may have limited capacity to have budget allocated to the Project. Availability of counterpart funding also contributes to increase this type of risk. The Bank team is monitoring the fiscal situation and is engaging in constant dialogue with the State Treasury to avoid impacts to the operations under preparation.

(b) **Fiduciary Implementation Risks: Substantial**. During previous Project execution, weaknesses were identified related to (i) project delay in executing and documenting the use of funds by the community association subprojects and providing respective supporting documentation; and (ii) institutional administrative adjustments and strengthening that were not fully implemented. Mitigation measures for implementation during the proposed project would include: (i) regional offices properly staffed to provide timely support to the subprojects, including use of the asset management system, to ensure that the control process is extended to the local level; and (ii) an agreed-upon action plan to be followed by partner

and implementation institutions (e.g., Agropolos) to ensure proper FM arrangements are in place by project signing and throughout project implementation.

(c) **Other-Climate Change and Severe Weather Risk is Substantial**. Most of Ceará's territory is in the semiarid region of Brazil, with elevated temperatures, spatial and temporal variability of rains and high-water scarcity. This reality was worsened by the six consecutive years of drought experienced by the State since 2012. Different weather simulation models predict an overall increase of extreme events (increased temperatures and less reliable rainfalls), which would further increase the challenge for the agricultural production in the Northeast of Brazil. To mitigate climate risks, the project design enhances resilience through CSA practices and technologies in the financed investments.

VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Brazil

Ceara Rural Sustainable Development and Competitiveness Phase II

Project Development Objectives(s)

The Project Development Objective (PDO) is to enhance access to markets and access to water and sanitation, adopting climate resilient approaches, by targeted beneficiaries in selected areas of the State of Ceará.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	End Target
To enhance access to markets			
Increase gross value of sales (in real terms) by members of organizations participating in approved subprojects (Percentage)		0.00	15.00
To adopt climate resilient approaches			
Farmers adopting improved agricultural technology (CRI, Number)		0.00	7,000.00
To increase access to improved water and sanitation			
People provided with access to improved water sources (CRI, Number)		0.00	94,500.00
People provided with access to improved sanitation services (CRI, Number)		0.00	19,845.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	End Target
Component 1 - Sustainable Economic Inclusion			
Subprojects for strengthening organizations for enhanced market access and enabling sustainability (Number)		0.00	390.00
Subprojects for social and productive inclusion of vulnerable groups (Number)		0.00	40.00
Farmers reached with agricultural assets or services (CRI, Number)		0.00	13,000.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	2,600.00
Beneficiaries'organizations strengthening existing market and/or accessing new marketing channels (either private and/or public markets) (Percentage)		0.00	60.00
Beneficiaries trained in support of subproject implementation (Number)		0.00	2,500.00
Component 2 - Rural Water Supply and Sanitation Access			
Households with water reuse systems implemented for agricultural production (Number)		0.00	200.00
Water supply systems (WSS) implemented/rehabilitated in operation (Number)		0.00	165.00
Implemented technologies and/or hydro-environmental activities to improve the efficiency and/or resilience of the system (Percentage)		0.00	40.00
Household sanitary kit implemented (new kit and/or treatment) (Number)		0.00	5,250.00
Component 3 - Institutional Strengthening and Project Management			
EMATERCE restructuring model designed and implemented (Yes/No)		No	Yes
Staff trained from SDA and project's strategic partner institutions		0.00	400.00

Indicator Name	DLI	Baseline	End Target
(Number)			
Communities supported by the water supply activities submitted for registration in SIASAR (Percentage)		0.00	100.00
Gender Gap, Citizen Engagement and Grievance Redress Mechanism			
Female family farmers supported by productive subprojects reducing the difference in the gross sales value of those obtained by men (Text)		TBD in the first year	15%
Women reducing time (hours per week) dedicated to household chores (Text)		TBD in the first year	20% (hours per week)
Beneficiaries satisfied with productive investments and water & sanitation access (Percentage)		0.00	80.00
Complaints and inquiries received through the Grievance Redress Mechanism that are registered and addressed (Percentage)		0.00	90.00
Trained youth by capacity building activities under the project (Number)		0.00	440.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Increase gross value of sales (in real terms) by members of organizations participating in approved subprojects	The difference (with and without project) in gross sales value, in real terms, averaged across the participating members of the producer organization.	Annual	Field data collection at the producers and organiation	The content will be elaborated by the UGP M&E team and IPECE staff.	SDA/UGP in coordination with IPECE.

			levels and available in SIGPRO reports.		
Farmers adopting improved agricultural technology	The household irrigation systems will be used for supplementary irrigation of rained agriculture, for diversification of production or for the transformation from a primarily subsidence agriculture towards the production of one or two marketable products, depending on the regional conditions and depending on the farmers' interests. Technical assistance will introduce good agricultural practices adjusted to each situation. These are, among other, the use of organic fertilizer, certified seeds, diversification and shifting cultivation and will be identified during project implementation. The indicator evaluates if at least one good agricultural practice transferred during technical assistance is being	Biannual	Baseline in each subproject proposal. End data by field technical assistance. Subproject completion reports.	The number of producers who have adopted an improved agricultural technology (details are included in the POM) promoted under subcompenents 1.1, 1.2 and 2.2.	SDA/UGP in collaboration with EMATERCE and technical assistance providers.

	adopted by the farmer. Municipal staff using their site visits will evaluate use of agricultural practices or improved agricultural technology. One year after the completion of the first systems, an independent evaluation will confirm monitoring results of the municipal staff. If needed, an additional independent evaluation will be realized during mid-term review.				
People provided with access to improved water sources	This indicator measures the cumulative number of people who benefited from improved water supply services that have been constructed through operations supported by the World Bank.	Biannual	Works completion certificate with registration of the beneficiary responsible for each household in serted via SIGPRO	The total number of families will be verified upon water supply system implementation . Details included in the POM.	SDA/UGP in collaboration with CAGECE and SOHIDRA.
People provided with access to improved sanitation services	The indicator measures the cumulative number of people who benefited from improved sanitation facilities that have been	Biannual	Works completion certificate with registration	Number of rural people reached with sanitation services (sanitary kit and/or treatment) implemented by the	SDA/UGP in collaboration with CAGECE and SOHIDRA.

	constructed through operations supported by the World Bank.		of the beneficiary responsible for each household inserted via SIGPRO.	project. Details are included in the POM.	

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Subprojects for strengthening organizations for enhanced market access and enabling sustainability	Number of strengthened subprojects to enhance producer organizations' market access and sustainability	Biannual	Data will be collected in the field through standardized reports, including monthly monitoring and final completion reports.	Sum of the number of productive subprojects implemented and operational from subcomponent 1.1.	SDA/UGP in collaboration with EMATERCE and technical assistance providers.
Subprojects for social and productive inclusion of vulnerable groups	Number of subprojects for priority groups	Biannual	Field data collection through standardized monthly	Sum of the number of social and productive subprojects implemented and operational from	SDA/UGP in collaboration with technical assistance providers.

			reports.	subcomponent 1.2.	
Farmers reached with agricultural assets or services	This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops). Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal health/veterinary services), phyto-sanitary and food	Biannual	Data sources include Monthly Monitoring Reports as detailed in POM.	Sum of people reached with agricultural assets or services (works, services, goods, consultancies and technical assistance) supported under subcomponents 1.1 and 1.2.	SDA/UGP in collaboration with EMATERCE and technical assistance providers.

	safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project.				
Farmers reached with agricultural assets or services - Female		Biannual	Data sources include Monthly Monitoring Reports as detailed in POM.	Sum of women reached with agricultural assets or services(works, services, goods, consultancies and technical assistance) supported under subcomponents 1.1 and 1.2.	SDA/UGP in collaboration with EMATERCE and technical assistance providers.
Beneficiaries'organizations strengthening existing market and/or accessing new marketing channels (either private and/or public markets)	Percentage of beneficiaries' organizations (out of the total number of subprojects) that strengthened existing markets and/or accessed new (public or private) marketing channels.	Biannual	A baseline will be collected to assess market access. Reports of	Percentage of total support beneficiaries' organizations (out of the total of subprojects) that strengthened existing markets and /or	SDA/UGP in collaboration technical assistance providers.

			Attestation t o confirm the sales to public and private markets that are improved and/or reached for the first time.	accessed new marketing channels (either private and/or public) in comparision with baseline. Details are included POM.	
Beneficiaries trained in support of subproject implementation	Number of beneficiaries trained in support of subproject implementation, business management, production and marketing enhancement, natural resources management, climate smart and resilience, among others. The indicator must be tracked and disaggregated by gender and age.	Biannual	Data will be collected in the field through the Training Reports. Details are included in the Operations Manual.	Sum of people trained in support of subproject implementation under capacity building plan. Cadastro de Pessoa Física (CPF) will be used to avoid double counting.	SDA/UGP staff responsible for Capacity Building Supervision in collaboration with Advisory Technical contracted (TA services / consulting services).
Households with water reuse systems implemented for agricultural production	Number of rural households served with implemented water reuse systems, based on water production demands from component 1.	Biannual	Cadaster of beneficiaries represented in family farmers organizations that are responsible for managing	Sum of number of rural households that incorporate reuse water systems technologies for production.	SDA/UGP in collaboration with EMATERCE.

			the water reuse systems introduced via SIGPRO.		
Water supply systems (WSS) implemented/rehabilitated in operation	Number of water supply systems that are implemented and operational by the project, including new and rehabilitated systems.	Biannual	Works completion certificated and in operation by SISAR.	Sum of the number of implemented systems (new and rehabilitated) that are in operation through SISAR management.	SDA/UGP in collaboration with partner institutions (SISAR, CAGECE and SOHIDRA).
Implemented technologies and/or hydro-environmental activities to improve the efficiency and/or resilience of the system	Percentage of systems that needed investments aiming at implementing water supply systems with technological innovation, and/or hydro-environmental activities.	Biannual	Progress reports issued by SISAR and sent to SDA.	Beyond the contabilization of the incorporated technologies, the indicator will also capture the gains achieved upon adoption of innovative technologies.	SDA/UGP in collaboration with SISAR.
Household sanitary kit implemented (new kit and/or treatment)	Number of rural households served with sanitary sewage (shelter and/or treatment). Details included in MOP.	Biannual	Works Completion Certificates.	Sum of the number water supply systems from the induced, spontaneous, and component 1 demands.	SDA/UGP in collaboration with CAGECE and SOHIDRA.
EMATERCE restructuring model designed and implemented	Elaboration of a restructuring study of EMATERCE as well the	Biannual	Study prepared and semi-annual	SIGPRO Document Module and the monitoring of the	SDA/UGP in collaboration with EMATARCE and

	follow-up of its implementation plan.		monitoring of the implementation plan of the EMATERCE.	implementation plan. Measument parameters are detailed in the POM.	contracted consultancy.
Staff trained from SDA and project's strategic partner institutions	Number of staff trained across different partner institutions.	Biannual	SDA/UGP training reports.	Sum of staff trained under capacity building plan. Cadastro de Pessoa Física (CPF) will be used to avoid double counting.	SDA/UGP staff responsible for Capacity Building Supervision.
Communities supported by the water supply activities submitted for registration in SIASAR	Number of communities benefited with supply systems and sanitary module registered in the SIASAR.	Biannual	The Registries will be informed by the technicians of the Cities Secretariat to the UGP via SIGPRO.	Records will be reported via standardized reports via SIGPRO. Details are included in the POM.	SDA/UGP in collaboration with City Secretariat technicians.
Female family farmers supported by productive subprojects reducing the difference in the gross sales value of those obtained by men	Organized female family farmers, supported with subprojects, reducing their income gap by 15% with respect to male organized family farmers.	Annual	Field data collection for the impact evaluation. Baseline value will the assessed in the first year	Comparison between the percentage difference of female and male's total sales gross values at the baseline and female and male's total sales gross values at the end	SDA/UGP in collaboration with EMATERCE and IPECE.

			of project.	of project.	
Women reducing time (hours per week) dedicated to household chores	Reduction in time burden to collect water resulting for securing access to water supply through project investments under component 2.	Annual	Field data collection under specific evaluation study.	Percentage difference between hours per week of household chores dedicated by women at baseline and hours per week of household chores dedicated by women by the end of project.	SDA/UGP in collaboration with data collection recruited firm.
Beneficiaries satisfied with productive investments and water & sanitation access	Percentage of beneficiaries that are satisfied with productive investments and water & sanitation access (disaggregated by gender and priority groups).	Annual	Satisfaction Beneficiary Survey conducted at Mid-Term Review and the end of subproject implementation.	Data will be incorporated in the SIGPRO Indicators Module based on the Citizen Engagement Survey.	SDA/UGP in collaboration with related partners.
Complaints and inquiries received through the Grievance Redress Mechanism that are registered and addressed	Percentage of claims and inquiries received and addressed through the GRM (disaggregated by gender, age and priority groups).	Continuous	GRM established by the UGP accessible to beneficiaries and project affected	The GRM will register all Project-related claims received and corresponding responses provided by SDA/UGP.	SDA/UGP

			people through different outlets, both physical and electronic.		
Trained youth by capacity building activities under the project	Total number of youth trained as part of capacity building activities under Component 1 & 2.	Biannual	Training registries and progress project reports.	Sum of young people trained under capacity building plan. Cadastro de Pessoa Física (CPF) will be used to avoid double counting.	SDA/UGP staff responsible for Capacity Building Supervision.

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Brazil
Ceará Rural Sustainable Development and Competitiveness Phase II

Implementation Arrangements

1. The State of Ceará will be the Borrower for the proposed loan, with the Federative Republic of Brazil serving as the Guarantor. The State, through the Secretariat of Agrarian Development (*Secretaria Estadual de Desenvolvimento Agrário, SDA*), will be responsible for the implementation of the Project, through the Project Management Unit (UGP, in Portuguese), already established for the previous "Ceará Rural Development and Competitiveness Project" (P121167). SDA will be responsible to guide the UGP on the general State policies and coordinate collaboration with other State Secretariats and agencies, which are relevant for the Project context[44]. With the operational support of SDA's technical coordination's, UGP will continue to be responsible for the overall management, planning, coordination, monitoring and evaluation of all project activities, both at the central and field levels, as well as for project financial management, procurement, disbursements and accounting. UGP will also be responsible for implementing and monitoring the social and environmental safeguards instruments, and for disseminating project results through a proactive communication strategy.

2. A Steering Committee, chaired by SDA, will be established to improve the inter-institutional coordination with other State Secretariats, co-implementers and partner agencies and to dialogue with the State's Planning and Finance Secretariats to ensure that counterpart resources are allocated in the State's budget. Key managerial and technical staff will be formally appointed as to be fully operational immediately after Project effectiveness in accordance with detailed profiles and Terms of Reference as included in the Project Operational Manual (POM).

3. For project implementation support, SDA/UGP will count with the support from two co-implementer agencies:

a. **Agropolos Institute of Ceará (*Agropolos*)** is a non-for-profit civil organization with a public mandate and an independent legal standing. On March 7, 2002, Agropolos was accredited as a Social Organization (OS) to provide support to rural policies, meeting the requirements of State Law No. 12,781 of December 1997, with the State Government of Ceará, through State Decree No. 26,528 and State Decree No. 29,320 of June 12, 2008; and
b. **State Auditing Accounts (*Tribunal de Contas do Estado do Ceará – TCE*)** is the public institution responsible for controlling public assets and state resources. It has the constitutional competence to supervise and judge the good and regular application of public resources by administrators and other officials, assisting the State Legislative Assembly in the exercise of external control.
c. **State General Controller and Ombudsman (*Controladoria e Ouvidoria Geral do Estado do Ceará* – CGE)** is the state unit responsible to support the State's direct and indirect agencies on legal

[44] Secretariat of Water Resources (Secretaria dos Recursos Hídricos, SRH), Secretariat of Cities (Secretaria das Cidades), Secretariat of Aquaculture and Fisheries (Secretaria da Pesca e Aquacultura, SPA), Secretariat of Planning and Management (Secretaria do Planejamento e Gestão, SEPLAG), Environmental Policies and Management Council (CONPAM), State Superintendence of the Environment (Superintendência do Meio Ambiente do Ceará, SEMACE), State Water and Sanitation Company (Companhia de Água e Esgoto do Ceará, CAGECE), State Superintendence of Water Works (Superintendência de Obras Hidráulicas, SOHIDRA), and State Rural Extension and Technical Assistance Company (Empresa de Assistência Técnica e Extensão Rural do Ceará, EMATERCE).

procedural compliance for contracting public expenditures and complying with the public information access law.

4. Agropolos will provide managerial and implementation support to SDA/UGP, as the State faces fiscal constraints to recruit additional public servants. Agropolos will also provide field logistics support for local implementation through its 12 territorial units. TCE will carry out external auditing of annual financial statements. Those institutions were part of the institutional arrangements for Sao Jose III Project and, during Project preparation, they were reassessed and found in compliance with Bank's policies and procedures. Improvements in their roles and governance were incorporated and will be implemented as part of the proposed Project.

5. SDA/UGP will also partner with several State institutions, which will play a vital role in the implementation of project activities, through Cooperation Agreements to formalize responsibilities regarding project actions. The main partner institutions and their roles and responsibilities in the Project are:

(a) The **Ceará State Rural Extension and Technical Assistance Company (EMATERCE),** a public agency linked to SDA, provides technical assistance and rural extension services to agricultural producers and implement federal and state policies. Under Component 1, EMATERCE will provide rural technical assistance services to producers' organizations, participate in business plan evaluation committees and supervise goods and services supplied to participating organizations by other providers.

(b) The **Ceará Water and Sanitation Company (CAGECE)**, a public joint venture agency, provides solutions in basic sanitation, with economic, social and environmental sustainability. The **State Superintendence for Water Works (SOHIDRA)** is connected to the Secretariat of Water Resources and is responsible for implementing public works in Ceará's water sector. Under Component 2, CAGECE and SOHIDRA will be responsible for the technical, economic, social and environmental viability analysis of proposed water investments in prioritized communities, for assisting the UGP in the bidding process for contracting and approving the designs and works, as well as supervising the implementation of works.

(c) The **Integrated Rural Water and Sanitation System (SISAR)** is a non-governmental, not-for-profit organization, formed by community associations served with rural water, to ensure the provision of maintenance services for water supply based on payment of customized tariffs, in a self-managed and self-sustaining way, contributing to the social development and environmental preservation. Under the Project, SISAR will provide technical assistance for financed water systems and onsite sanitation infrastructure; treatment and control of water quality; and capacity building for supported associations in management of the systems. In addition, it will implement a sludge management scheme for cleaning septic tanks through charging for this service provision.

(d) The **Ceará State Meteorological and Hydrological Resources Foundation (FUNCEME)** is a public agency providing cutting-edge information on climate, hydrology and the environment. Under the Project, FUNCEME will lead strategic studies on soils and agro-climatic and economic zoning to enhance SDA's planning capacity to execute rural policies and programs. Also, FUNCEME will pilot recovery and conservation management and practices to enhance climate resilience in Caatinga's areas; and will share water availability information with SDA.

(e) The **Institute of Research and Economic Strategy of Ceará (IPECE)** is a government agency responsible

for generating studies, research and socioeconomic and geographic information that allow the evaluation of programs and the elaboration of strategies and public policies for the development of the State of Ceará. Under the Project, IPECE will lead key strategic and operational studies, such as value chains market research and water demand for agricultural production. Also, IPECE will lead and coordinate the impact evaluation of the Project.

(f) The **Secretary of Cities** has as its mission to promote the balanced development of cities and regions of Ceará through actions of urban structuring, housing, basic water and sanitation, mobility, transit and institutional strengthening of Municipalities. For the proposed Project, it will lead the information collection to scale up the development of the Rural Water and Sanitation Information System (SIASAR) in Ceará; and will partner in the development of public policies for Rural water supply and sanitation.

(g) The **State Company for Water Management (COGERH)** is the entity responsible for managing the State's water resources, promoting access to bulk water and contributing for the sustainable development. For the proposed Project, it will assist SDA in the identification of water sources availability with quality and quantity needed for supplying water for human consumption and/or production.

6. At the same time, the Project will also rely on the active participation of other important stakeholders:

a) **Territorial Development Councils** and **Municipal Councils for Sustainable Rural Development** will support CAs and POs in the identification of investments and subprojects and help to stimulate synergies among public and private investments at local level.
b) **Non-Governmental Organization (NGOs) and Private Sector actors** will provide complementary services to the project stakeholders. Their roles will be as additional service providers along the supported business plans, or as consultants during planning and implementation, filling capacity gaps or providing specialized technical assistance in addition to the public services provided by government. The UGP will prequalify private sector consultants and consulting firms to work as Technical Services Providers (TSP) in order to guarantee the quality of service provision.
c) **Community Associations (CA)** will identify and operate water supply and basic sanitation investments. CAs are locality-based civil-society organizations, involved in social or productive activities, often managing local public resources. As such, they may include community associations per se, as well as cooperatives and rural integration centers.
d) **Producer/Family Farmers Organizations (PO)** will implement productive investments, as approved in financed subprojects in Subcomponents 1.1 and 1.2, in collaboration with UGP, EMATERCE and hired consultancies. POs vary greatly in size, spatial reach and capacity. They include producer/family farmers' associations, cooperatives, condominiums, or other types of legal organizations. To receive matching grants, POs will be required to fulfill all the eligibility criteria established for the Project, as described in the POM.

7. SDA/UGP will also convene, once a year, a multi-stakeholder meeting (consultative forum) including civil society, agri-business organizations, academics, indigenous peoples, project beneficiaries, municipalities, government institutions, and other concerned parties, to openly discuss and receive feedback and advice regarding project strategy and progress, as part of the citizen engagement strategy. The proceedings of each of these annual meetings will be submitted to the Bank. The SDA/UGP will also ensure broad and permanent public information on the project.

8. SDA/UGP will submit semiannual reports to the Bank covering the planned actions including selected business initiatives, status of implementation, outcomes, financial statements, procurement plans, environmental and social issues, and actions taken to ensure satisfactory implementation. These reports will be shared with policy makers to facilitate effective project management, reformulation of project strategy, if needed, and dissemination of experiences.

9. SDA/UGP will implement the Project in accordance with the POM, satisfactory to the Bank, which shall include the rules, methods, guidelines, standard documents and procedures for the carrying out of the project, including the following: (a) the procedures for the implementing, monitoring and evaluation of the Project (including the technical, procurement, disbursement, financial management, social and environmental requirements thereof); (b) the eligibility criteria for the selection of producer organizations and rural communities; (c) detailed social, economic, financial, technical and environmental criteria for the evaluation and ranking for selecting Subprojects; (d) the functions, responsibilities, structure and key staff composition of the UGP; (e) model forms of Subproject Agreements; (f) indicators to be used for Project monitoring and evaluation; and (g) the Safeguard Documents.

Implementation Support Plan

10. Due to the adjustments made in the project design in relation to the previous operation, and the emphasis placed on technical quality and adequate monitoring and evaluation, the Project will require intense implementation support in the first three years of implementation. The WB office in Brasília will be the main source of Project support as it has qualified technical expertise related to the project scope, fiduciary and safeguards staff available to follow-up on the Project's implementation. Implementation support will be provided through short follow-up technical remote meetings and semiannual supervision missions that focus on the following areas:

(a) **Strategic support.** Supervision missions will meet with the SDA/UGP representatives to (i) review progress on the Project's activities; (ii) discuss strategic alignment of the Project's different activities, especially at the planning level between the relevant stakeholders; and (iii) evaluate progress on cross-cutting issues such as M&E (baseline and design and execution of impact evaluation), training, communication, knowledge exchange, innovation, dissemination of Project results and experiences, and coordination between relevant stakeholders.

(b) **Technical support.** Supervision will concentrate on ensuring the technical quality of investments. Implementation of Component 1 activities will require intense support during the first two years to ensure that the reformulated business plan cycle is in place and functioning and the adequacy and efficiency of technological solutions aimed increase climate resilience of agricultural production. In Component 2, emphasis will be placed on territorial prioritization and engineering aspects, as well as in a close coordination with Component 1's demands for water, sanitation and reuse investments. For Component 3, technical assistance including capacity building and institutional strengthening will be provided to enhance performance of Project-supported activities. Lastly, for all project activities supervision will ensure the quality of bidding documents, Terms of References (ToR), evaluation reports, construction plans, products delivered by consultants. During the execution of investments, technical supervision will be provided to ensure that technical contractual obligations are met. Regular site visits will be carried out during project implementation and involve technical specialists as needed.

(c) **Fiduciary support.** Periodic supervision of procurement and FM support will be carried out by the World Bank semiannually or annually to (i) perform desk reviews of project IFRs and audit reports, following up on any issues raised by auditors, as appropriate; (ii) assess the performance of control systems and arrangements; (iii) update the FM rating in the FM Implementation Support and Status Report as needed; (iv) provide training and guidance on carrying out procurement processes in compliance with the Procurement and Anti-Corruption Guidelines and the POM; (v) review procurement documents and provide timely feedback to the UGP; (vi) carry out the post review of procurement actions; and (vii) help monitor project's progress against the Procurement Plan.

(d) **Safeguards support.** The coordination that began during preparation will continue throughout Project implementation, especially to ensure that relevant safeguards concerns are included in the works financed under Components 1 and 2 through due diligence from applications of the site-specific ESMPs, RPFs and IPPFs and effective mitigation measures. Supervision from the World Bank safeguard specialists will take place at least twice a year

Implementation Support Resource Estimates

Time	Focus	Skills Needed	Resource Estimates
Year 1	-Refine and finalize strategic studies and subcomponent activities and ensure quality of detailed designs -Management and implementation support to initiate project's activities, including technical and procurement review of ToRs and bidding document; promoting innovation in the project; and baseline collection -Social and environmental safeguards -Fiduciary arrangements and FM systems	-Project management -Agricultural, climate change, water and sanitation expertise -Safeguards management -Fiduciary management -Monitoring and evaluation	-2 yearly support missions, one with full Task Team -support from country office at the technical, safeguards and fiduciary levels
Year 2-5	-Project implementation -Technical quality (Technical review of ToR, technical reports, and bidding documents; technical assistance, capacity, and institutional strengthening efforts) -Safeguards -Fiduciary (FM review and procurement review and feedback of bidding documents and consultant contracts) -Monitoring and evaluation	-Project management -Agricultural, climate change, water and sanitation expertise -Safeguards management -Fiduciary management -Monitoring and evaluation	-2 yearly support missions, one with full Task Team -support from country office at the technical, safeguards and fiduciary levels
Year 6	-Completion of investments -Monitoring and evaluation -Reporting	-Project management -Technical quality -Monitoring and evaluation	-2 support missions, one with full Task Team

Skill Mix Requirements

Skill Needs for Supervision	Origin	Estimated Staff Weeks
Task team leaders	Country based	8 per year
Water supply and sanitation specialists	Country based	5 per year
Agricultural and climate change specialists	Headquarters and country based	4 per year
Agricultural economists	Headquarters and country based	5 per year
FM specialist	Country based	4 per year
Procurement specialist	Country based	4 per year
Social specialist	Country based	4 per year
Environmental specialist	Country based	4 per year
M&E specialists	Headquarters based	6 per year

Operations analyst	Country based	6 per year
Lawyers	Country based	4 for project lifecycle
Disbursement officers	Country based	2 per year

ANNEX 2: Project Design Analysis

COUNTRY: Brazil
Ceará Rural Sustainable Development and Competitiveness Phase II

A. General Concept.

1. **Project Development Objective**.

The Project Development Objetive (PDO) is access to enhance access to markets and access to water and sanitation, adopting climate resilient approaches, by targeted beneficiaries in selected areas of the State of Ceara.

2. **PDO Level Indicators**

Access to markets:

(a) Increase gross value of sales (in real terms) by members of organizations participating in approved subprojects (percentage)

Access to water and sanitation:

(b) People provided with access to improved water sources (number, CRI)
(c) People provided with access to improved sanitation services (number, CRI)

Adoption of climate resilient approaches:

(d) Farmers (members of supported organizations) adopting improved agricultural technology (number, CRI).

B. Strategic Approach

3. Although a formal assessment for the São José III Project (closing date April 30, 2019) has not yet been carried out, important lessons have already been identified that provided guidance in designing the proposed operation. The project will incorporate innovations and new activities (some of which would help address the main issues identified in the previous operation) with the objective of increasing efficiency and likelihood of achieving the intended results. Some of the main innovations are:

(a) Concentrate the interventions by defining key priority territories where the activities would be more likely to produce sustainable impacts;
(b) Increase focus on larger groups of beneficiary organizations to enhance competitiveness and profitability, as well as addressing the climate vulnerability and be able to cope with potential impacts of climate change;
(c) Give emphasis on vulnerable groups, including indigenous peoples, women and youth, as well as introduce mechanism to reduce gender gaps and gender-based violence;
(d) Ensure enhanced and sustainable formal linkages with prospective buyers, under clearly stated market standards and conditions to enhance market access;
(e) Redesign the investment cycle of the productive subprojects (Component 1) to shorten the time needed to approve and implement subprojects;

(f) Improve quality of business plans/subprojects preparation with greater emphasis in reducing climate vulnerabilities and environmental aspects, contributing to sustainability of investments;
(g) Establish greater interconnection between the two main components of the project to maximize efficient use of resources and increasing well-being of the rural population, including enhancing access to water for productive purposes;
(h) Provide more resources to improve focus on supervision of subproject implementation, increasing quality and sustainability of investments as well as likelihood of financial success;
(i) Diversify the use of alternative sources of water supply for integrated systems and sanitary modules;
(j) Define a long-term strategic vision for the framework of institutional strengthening and restructuring of the SDA/UGP, EMATERCE and greater support for strengthening the capacity and coordination of key partners institutions.

4. In order to support the new focus on selected territories within the State that could provide better conditions to allow a more sustainable and articulated development, including greater possibilities to build-in mechanisms to decrease vulnerability to climate change and extreme weather events (mainly in the context of critical climate change scenarios forecasted for Ceará), the Project will finance, as soon as possible but not later than immediately after inception (and in close collaboration with IPECE and FUNCEME), the following studies:

a) Conclusion of a medium-intensity soils survey (in scale 1: 100,000) for the western coast of the state (about 10% of the area of the State not mapped until now) and unification of the general legend for all soils of the state, including all mapping executed so far in Ceará;
b) Development of a Municipal Alert Index (IMA) for rainfed agriculture;
c) Development of a Geo-Environmental Zoning and Vulnerability system and implementation of a System of Forecasting Drought, in order to provide real-time information to farmers in the field;
d) Organization of the available basic information in order establish an Agro-Pedo-Climatic Zoning to subsidize and support the implementation of a territorial strategy for the actions under proposed operation, as well as other developmental efforts in the State.

5. The Agro-Pedo-Climatic Zoning mentioned in point (d) above consists of the integration of information that involves agricultural data on cultures, soils, water availability, and climate. It results in the spatial organization of agricultural and forestry activities, as well as water availability for multiple uses, aimed at subsidizing policies for the conservation and recovery of natural systems, allowing a more harmonious relationship between productive human activities and natural resources. The methodology makes use of environmental databases and presents a classification that integrates several variables through geoprocessing operations. It is composed by the integration of different themes, such as Soils Aptitude; Climatic Aptitude and Agroecological Aptitude of cultures, complemented by Geo-Environmental Zoning and Land Potential for Irrigation. This is a work in progress, mainly undertaken by IPECE and FUNCEME, that needs a complementary budgetary support to be finished and make it operational to be used widely in the State. Those studies and tools are essential elements to guide the geographic coverage of the project and areas with greater potential for sustainable agricultural development. As a result of the climate and vulnerability risk targeting to areas and populations, the entire project will provide support for adaptation to climate impacts to the heaviest-hit areas and segments of the population to adapt economically through sustainable economic inclusion and through the provision of resilient water, sanitation and irrigation services.

C. Components.

6. **Component 1: Sustainable Economic Inclusion (US$68.79 million; IBRD loan US$43.54 million).** The main objective

of Component 1 is to improve the market access of organized smallholder producers (mainly family farmers, with emphasis on vulnerable groups, women and youth) through investments to increase the climate resilience of their primary agriculture productions and increase the competitiveness of their businesses. Through their own organizations, producers will have possibilities to mitigate the impact of small farm size (atomization), adopting new technologies and increasing their competitiveness, improving their organizational skills and product quality, quantity, and traceability as required by the high-end value chains. Moreover, given the climate variability and water scarcity, the component will also identify the need for water supply for the families involved in the subprojects, for human consumption as well as for the productive purposes. This demand will be evaluated as part of the activities of component 2 to attend families with water supply systems or assessing the feasibility for reuse of gray water for production. The component will also pay special attention to increase the capacity to manage potential impacts of climate change to agro-ecosystems, by promoting technologies and agricultural and resource management practices that have demonstrated highest effects on farm suitability and effectiveness in semi-arid rural areas and are well adapted to agro-climatic conditions in the State for 7,000 farmers. The component will be implemented through targeted-public oriented subcomponents:

7. **Subcomponent 1.1: Strengthening Organizations for Enhanced Market Access (US$60.24 million; IBRD loan US$37.88 million).** The main objective of this subcomponent is to support selected Producer Organizations (PO) in priority value chains to increase their production capacity and market competitiveness and their capacity to manage and cope with climate change (increasing resilience in the long run). This subcomponent will finance the development and implementation of Productive Subprojects for approximately 390 Producer Organizations (PO) (reaching an estimated total of about 11,750 people). The subcomponent will support legally constituted POs that: (i) have never been assisted (around 80 percent of the subcomponent) and (ii) have received in the past investment support (around 20 percent) for strengthening their investments and their business operation (including under the Sao Jose III Project) and are requiring key additional investments to solve unforeseen constraints affecting their management and marketing or to enhance environmental sustainability of livestock production in the *Caatinga* region. It is estimated that at least 20% of the total number of subprojects will comprise women's and youth organizations, reducing gender gaps mainly related to income opportunities. The subcomponent will finance:

a. Provision of technical assistance support to: (i) identifying actual/potential market demands to be linked to, and the selection of potential buyers; (ii) carrying out pre-investment studies, including the formulation of business plans and associated Productive Subprojects; (iii) strengthening the capacity of POs to: comply with organizational and business regulations, and to improve organizational, managerial, business and risk-management skills. Young people will be a priority target group for training in management, leadership and entrepreneurship in rural areas.

b. Provision of Matching Grants to the POs for carrying out Productive Subprojects consisting of, among others: (i) small scale on-farm infrastructure; (ii) on-farm CSA practices and technologies; (iii) soil, energy, and water conservation measures and management; (iv) provision and utilization of inputs, equipment and tools; (v) complementary technical assistance services; (vi) support to meet legal environmental and sanitary requirements for market access (mainly in agro-processing and livestock production); and (vii) in areas under environmental risk, support to the implementation of sustainable Management Plans (especially agro-silvo-pastoral) to be prepared and implemented in areas of Caatinga (xeric shrublands and thorn forests). These management plans foresee the adoption of sustainable practices and technologies that will address land degradation and foster climate adaptation and mitigation while increasing productivity, including

the following: improved pasture, grazing and manure management; improving feed use; breeding adaptive species; addressing land conversion and slash-and-burn (land management); sustainable Caatinga forest management and use practices; and integrated crop-livestock management.

8. The subcomponent will also contribute to the project's net carbon balance through: sequestration from afforestation/restauration of degraded areas and the transition from set aside or degraded lands to perennials (agro-forestry, orchards, gardens, tree crops, etc.); and through emission reductions from improved management of agro-forestry, livestock (e.g. feeding), and cropping systems. The supported Climate Smart practices will be further detailed in the POM.

9. **Subcomponent 1.2: Improving Social and Productive Inclusion for Vulnerable Groups (US$8.55 million; IBRD loan US$5.65 million)**. The main objective of this subcomponent is to support selected organizations of priority vulnerable groups (including indigenous peoples, traditional communities, and young participants) in rural areas to increase food security and income generation initiatives through improved productivity, greater efficiency in water use, and increased resiliency to climate change. This subcomponent will finance: (i) technical assistance, capacity-building activities and preparation of community development plans and Investment Subprojects; and (ii) the provision of Matching Grants to Vulnerable Groups for carrying out 40 Investment Subprojects (expected to benefit around 1,250 people). These subprojects should be based on best available practices and sustainable systems and seek to increase productivity, rationale water use; reuse practices and increase resilience to climate change. Deficits in water supply identified in the CDPs will be channeled to Component 2 for assessment of potential solutions.

10. **Selection of priority production chains targeted for intervention.** The strategy of the component (both subcomponents) is to work with selected productive value chains that make possible to increase the insertion of organizations of producers to the market, based on the fact that are technically feasible, offer possibilities of higher financial returns and are adaptable to the climatic situation in Ceará for their climate resilience. Priority productive value chains that have been strategically pre-identified as very promising, based on previous experience under São José III Project as well as on the results of recent financial analysis of their models using recommended technological levels, include: (a) fruticulture (guava, acerola, caja, graviola, mango, and passion-fruit or maracuja) produced for fresh consumption and for pulp; (b) cassava for flour or fresh (to be fried); (c) apiculture and honey production; (d) cashew nut production and processing; (e) cow milk; (f) goat and/or sheep for milk and meat; and (g) olericulture (coconuts and others).

11. Pre-identified value chains will be validated through a value chains study for the State of Ceará to be carried out by IPECE and FUNCEME to identify local productive arrangements that are predominant with family agriculture, which will be correlated with the index of environmental vulnerability and in conjunction with the selection of key priority territories, thus enabling the definition of production chains and areas scope that will be met by the project. Value chains will be selected, based on a set of criteria (to be defined in the POM) that will include: (i) concentration of selected priority value chains that are considered most promising for income generator in given municipalities/territories; (ii) agro-climatic priority areas as defined by soil and climatic vulnerabilities index (IMA); (iii) number of family farmers in the municipalities/territories participating the chain; and (iv) family agriculture organizations that could benefit by undertaking a collective actions grouping larger number or beneficiaries.

12. The POs to be beneficiaries of their proposed subprojects must comply with the following eligibility criteria (to be further detailed in the POM):

a. Organizations with a minimum of 20 members, where at least 75% of members of the beneficiary producers' organizations are family farmers holding *Declaração de Aptidão ao Pronaf (DAPs)* and belonging to the target groups specified in the call for proposals;
b. Must be in the priority territories defined by the Project and in accordance with the specifications in the call for proposals;
c. Subprojects should address production in the targeted value chains;
d. Should include adequate guarantees for the sustainable use of water resources, tapping into diversified water sources and using renewable sources of energy. The coordination with the activities under Component 2 is essential to identify possible solutions to existing water deficits;
e. Introduce innovation/new technology in accordance with local soil and climatic conditions, including the preparation and implementation of environmental management plans to ensure sustainable management of natural resources and enhance capacity to manage climate vulnerability;
f. Focus on food safety and market-driven production (concrete market access and potential buyers) and income generation;
g. Support the participation of women and youth in the subproject or target women-led or youth-led organizations.
h. For subprojects in Subcomponent 1.1 that have received support in the past for their productive investments and improvement in their financial viability (including under the ongoing Sao Jose III), they will be eligible for additional financing support under this Project if they present severe risks to their sustainability and mainly giving emphasis on the strengthening the managerial and marketing capacity and to support the implementation of agro-silvo-pastoral management plans, ensuring their long-term sustainability.
i. For groups of youngsters, the eligibility criteria are: (i) between 19 and 28 years old; (ii) with DAP; (iii) with formal education or vocational training completed; and (iv) when their proposals imply investments in the family productive units, with written concurrence from their families.

13. **Selection of subproject proposals to be financed**. Selection will be carried out by means of calls for proposals which will contain specific instructions and windows related to subcomponent 1.1. and 1.2, in order to handle them separately without competing between them and with attention to their specific needs. For these subcomponents a public call for expressions of interest will be made, through a public notice, which will be announced in the context of the Territorial Development Councils and Municipal Councils for Sustainable Development. In municipalities where these are not active, a meeting with local leaderships should be held to publicize and present the public notice. In principle, there will be a comprehensive Call for Proposal early during project implementation (once the preliminary activities of selection of territories and promotion/dissemination campaigns are completed). The need to have additional calls will be decided based on the results of the first call, in agreement with the Bank.

14. **Review of Business Plans, Community Development Plans and Subproject Proposals.** The UGP will set up a Technical Committee (TC) to review and assess the various investment proposals, giving them relative scores in support of the final selection on a competitive basis. The UGP may invite experts (either from other governmental institutions or agencies, or independent consultants hired for this purpose) to contribute to the evaluation and selection process whenever the UGP staff is facing demand peaks or does not have all the technical qualifications to assess specific proposals. The implementation flow for business/community development plans and productive investment Subprojects is presented below. Further details will be defined in the POM. Prior to the business plan formulation, candidate organizations need to submit expressions of interest in their participation to the project. While preparing the expressions of interest, the organizations may request a verification by the project of the suitability of their water supply and sanitation conditions. Should the organizations have no water supply, the project can choose:

(i) to solve the issue through component 2 – whenever there is an available water source (subcomponent 1.a) or (ii) invest in water supply, sanitation, and/or water reuse in agricultural production (subcomponent 1.b).

15. The main steps to be followed for the selection of subprojects to be financed will be the following (to be further complemented in detail in the POM):

(a) Preparation of call for Expressions of Interest (EI): A Technical Committee (TC) will be created to elaborate Terms of Reference for each Call for Proposals and to set up the *Eligibility Analysis Committee*. The ToR should define clear requirements in terms of water supply, sanitation, electricity supply, and a negative list of non-eligible activities that cause significant environmental impacts (among others) to be agreed as minimum eligibility and selection criteria in the POM. Each call for proposal could be targeting specific regions, value chains or different groups of intended beneficiaries. The TC will prepare the Call for Proposals and guide in the implementation of all the activities leading to the final selection of subprojects to be financed.

(b) Communication about Project objectives and opportunities: the UGP will elaborate a communication strategy and plan, which will include: (i) mechanisms for the identification of key stakeholders, (ii) the preparation of material to support the process so that advocacy actions reach the several municipalities involved in an effective manner, (iii) programming of events communication, promotion and advocacy about calls for proposals involving at least the Territorial Development Councils, and the Municipal Councils for Sustainable Rural Development.

(c) Support for the preparation of EI: After the announcement of the call, the interested organizations can seek support for the preparation and elaboration of the EI next to the institutions with which they have greater ties. For example: EMATERCE, unions, municipalities, social movements.

(d) Reception and review of EI: The *Eligibility Analysis Committee* will review the EIs against the terms of the call for proposals, after which the approved EIs will be sent to the State Rural Development Council (CEDR) for ratification. Once these have been ratified, the results will be communicated. All institutions that were directly involved or targeted in the initial communication events should receive a formal communication of results from the project.

(e) Business Plans (BPs)/Community Development Plans and subproject preparation:

  (i) once their EIs have been approved the potential beneficiary organizations could benefit from project-financed Technical Assistance services (ATER). The technical agents will first conduct a diagnosis of the situation: (a) characterization of primary production potentials and market opportunities, (b) entrepreneurship and organization's management capacity, (c) existing market outlets, etc. The diagnosis will be contracted to specialized advice service provides and will be produced as a tool to inform the preparation of BPs and subproject proposals. During this process the rationale and the feasibility of the proposal presented, as well as the compliance with the eligibility criteria and consistency with the negative list of activities, must be verified and the necessary improvements agreed with the proponents.

  (ii) Contracted ATER services for preparing the diagnosis will be supervised and monitored independently by SDA/UGP and other participating institutions (such as EMATERCE) to ensure quality of the service.

  (iii) Simultaneously the organization will benefit from a training process, including topics such as: (a) minimum requirements for compliance with project guidelines during implementation; (b) role and responsibilities of the institutions involved in the BP/subproject; (c) key technical guidelines for the promotion of efficiency and competitiveness in the value-chain; (d) environmental and social safeguards; and (e) subproject design methodology.

(f) Clearing proposals for Subproject preparation. Upon receipt of the diagnoses, the analysis committee will approve those deemed qualified, which may follow the process of elaboration of the Subproject and CDP.

(g) BP/CDP and subproject preparation: based on the diagnosis, the ATER service provider will assist the beneficiaries in the preparation of the final BP/CDP and subproject proposal (establishing the subproject baseline). The ATER service will be supervised and monitored by the project, which, should it be necessary, will recommend the engagement of staff with complementary required skills to those already present. At this stage, the Environmental Checklist is applied (i.e. simplified environmental assessment which includes a definition of the project´s environmental category of impact (I, II or III) and preventive and mitigation measures. The subproject proposal must include environmental and municipal licenses for the works and activities to develop, as well as evidence of compliance with health safety regulations.

(h) Reception and review of BP/CDP and subproject proposal: Subproject proposals will be received by the UGP, where a Review and Approval Committee will be created for this purpose. The Committee integrates professionals with the necessary skills for technical, economic, social and environmental assessment of proposals. The members of the Review and Approval Committee will be trained on BP/CDP review according to project guidelines and the specific call selection criteria.

(i) Approval and signature of Matching Grant Contracts. For each subproject approved, a formal contract, the Matching Grant Contract, will have to be signed between SDA/UGP and the representatives of the beneficiary organizations/enterprises. This includes all technical, financial and managerial details, together with a procurement plan and a safeguard management program.

(j) Financing and Implementation. Subprojects will be implemented by the beneficiary organizations under community procurement and commercial practice rules. UGP will ensure implementation support and close monitoring during the investment phase and one year after completion, either directly or by using another participating agency (i.e. EMATERCE) or private sector consultants hired by UGP. The funds will be disbursed directly to the organization/s in accordance with the specifications and investment plans included in the Matching Grant Contract. The implementation process will be closely monitored by UGP, to provide support and assistance, but also to collect valuable data for the impact evaluation.

(k) Disbursement of funds to beneficiary organizations. The State Fund for Family Agriculture (FEDAF) will operate this phase of implementation with the beneficiary organizations. Beneficiaries will receive technical and managerial advice[45] regarding the administrative procedures regarding the receipt, use and accountability of the financial received form the project. These administrative procedures will be detailed in the POM.

(l) Assurance of technical, financial and environmental accountability: verification of compliance of all financial transaction and respective statements against project guidelines; verification of work and equipment purchase and installation according to technical specifications in the Matching Grant Contract, as well as checking the implementation of environmental mitigation measures and issuance of environmental licenses.

(m) Onset of new economic activities: Unless otherwise agreed between the beneficiaries and the Project, the ATER team that supported the elaboration of the subproject will continue to support the implementation. Technical assistance should be provided during a period of no less than 12 months after final implementation, the duration dependent on production cycle and complexity. Additional technical support should be mobilized according to identified needs from partners such as the Brazilian Service to Support Micro and Small Enterprises *(Serviço Brasileiro de Apoio às Micro e Pequenas Empresas – SEBRAE)*, the National Services for Cooperativism Learning (*Serviço Nacional de Aprendizagem do Cooperativismo – SESCOOP*), private services providers, etc. Technical assistance services must be able to provide effective assistance in raw material

[45] During appraisal the borrower must decide whether this multidisciplinary support will be contracted through the subproject (and included in the BP) or directly by the project.

production process, business management and operation, compliance with environmental and sanitary regulation, and market linkages.

(n) Monitoring and reporting of key indicators: every six months after subproject inception, the beneficiaries must systematically report on technical issues, financial management and business performance to the UGP to receive continuous support, as well as monitoring implementation of environmental safeguards. The project will develop a monitoring dashboard for subprojects with indicators to be defined in the POM.

(o) Evaluation. Each subproject will be evaluated to assess whether it achieved its own objectives, to measure its contribution to expected overall Project results, and to assess compliance with environmental safeguards and conditionalities established at the environmental licensing. An impact evaluation will be conducted on a sample of subprojects.

16. The procedures for the evaluation and scoring of EI, Business/Community Development Plans and subprojects will be detailed in the POM. Selection criteria must include: (i) technical, economic and environmental feasibility; (ii) alignment with set priority value-chain development (competitiveness); (iii) number of participant family farmers; (iv) adoption of best practices in soil and water management; (v) environmental sustainability (reduced negative impact, recovery of degraded areas, environmental suitability of proposed solutions); (vi) compatibility with project objectives and integration with other related initiatives in the state; (vii) participation of young people; and (viii) participation of women. Specific selection criteria will be identified for each subcomponent and value-chain targets.

17. All proposals, regardless of their specificities, should be clear and provide solid feasibility arguments concerning a number of aspects: (i) the market demand for the supported products; (ii) the supply (volume, quality and pattern) of raw materials; (iii) technical, financial and environmental feasibility; (iv) organizational and administrative capacity of the proponent organization; (v) proposed logistics and marketing strategy; (vi) technical specifications and detailed for required works and equipment; (vii) compliance with environmental safeguards and specific measures to prevent or minimize environmental impacts; (viii) management and operations plan (operations manual for the enterprise); (ix) financial management and accounting/transparency rules; and (x) the availability of water and description of water source (for investments comprising irrigation or on irrigated areas).

18. The financial support is provided to beneficiaries through Component 1 for several types of interventions, subject to the limits briefly presented here and further detailed in the POM:

Activity	Investments to be financed	Limits/beneficiaries' participation
Subcomponent 1.1: Productive Subprojects	Preparation of productive subprojects - Consulting costs for the identification, preparation of EI and full subproject proposals	Matching Grant: 100% of consulting costs, up to a limit of US$ 30,000 (to be determined in POM)
	Works, goods, consulting services and operating expenditures related to the implementation of the subproject (based on the BP).	Matching grant: Up to US$ 200,000. 92% grant and at least 8% of beneficiary organizations financing (in cash only).
Subcomponent 1.2: Investment Subproject for vulnerable groups	Development of Business Plans (BP) and Community Development Plans (CDP)	Matching Grant: 100% of consulting costs, up to a limit of US$ 30,000 (to be determined in POM)
	Works, goods, consulting services and operating expenditures related to the implementation of the investment subproject (based on the CDP)	Matching grant: up to US$ 100,000. 98% grant and at least 2% of beneficiary financing (in cash).

Implementation of pilot natural resources management plans	Works, goods, consulting services and operating expenditures related to the implementation of the plan (whether is included in a subproject or as an individual activity).	Matching Grant: up to US$ 40,000. Beneficiaries: no counterpart funding

19. Despite the definitions above, the investment amounts will be defined further based on the value chain arrangement and subproject characteristics, considering as well as different needs for technical assistance of the different organizations (to be recorded in the POM). The management capacity of the organizations will be assessed, as to better program the required effort in terms of capacity development. Business plans for all subprojects will be formulated using the RuralInvest platform, which will include strengthening the capacity of staff from SDA/UGP and from EMATERCE (that will be the agency of reference for this tool in the state), as well as establishing a partnership with a local higher education institution to streamline Rural Invest in its curricula development. The ATER companies involved in the preparation of proposals should also be trained in the methodologies adopted and promoted by the project.

20. In order to simplify, the processes related to the transfer of resources to beneficiaries will be made through the State Fund for the Development of Family Agriculture (FEDAF). This institution, in addition of transferring project matching-grants to beneficiary organizations, can also offer loans to finance the beneficiaries' mandatory contribution. The organizations must contribute with a minimum contribution to the total investment – the mechanisms to ensure evidence of beneficiaries' contribution will be defined in the MOP.

21. **Component 2 – Rural Water Supply and Sanitation Access (US$53.09 million; IBRD loan US$35.35 million).** The objective of this component is to support the State's efforts to universalize access to water services, by investing in the provision of services to prioritized rural communities that are subject to the highest climate risks, focusing on sustainability and resilience of service provision. Water services will include infrastructure investments in: (i) water supply for human consumption for communities identified on both components 1 and 2; (ii) rural onsite sanitation for communities supported with water interventions; (iii) reuse of grey water and of wastewater from desalinization processes to support rural development production; and (iv) protection or recuperation of water sources. Lack of access to water and sanitation has immediate implications on the health and quality of life of the population; and these consequences disproportionately affect women and children. In this sense, Component 2 actions will provide specific support to women, reducing gender gaps. This component directly supports the adaptation to climate-change induced drought-affected populations.

22. Component 2 will supply water to communities identified as part of the Component 1 selection process for both water supply service provision for human consumption and grey water reuse for production. In addition, in close coordination with Component 3, Component 2 will aim to promote the sustainable and reliable management of financed assets, bringing in innovative approaches and technologies and improving coordination for policy making and planning between the Agrarian Development, Cities, and Water Resources Secretariats, and their associated entities (e.g. COGERH, SOHIDRA, CAGECE).

23. This component will be coordinated by SDA, with close collaboration by CAGECE and SOHIDRA (for, mainly, evaluating engineer designs and supervising works implementation); and SISAR (for, mainly, carrying out mobilization/social activities and implementing the operation and maintenance scheme).

24. **Subcomponent 2.1: Expanding Water and Sanitation Services (US$49.13 million; IBRD loan US$32.72 million).** This subcomponent will finance new water supply systems[46] for prioritized rural communities using three approaches: (a) in response to the demands of Component 1; (b) spontaneous demand, and (c) induced demand; and will support the rehabilitation of water supply systems[47] of a specific number of communities prioritized by SISAR to join the existing O&M scheme to improve the SISAR scheme sustainability. Water supply systems will include the intake from water sources (most common are wells or small reservoirs), simplified treatment (e.g. desalinization, filtration and disinfection), reservation, distribution, macro and micro-metering; including the energy supply connecting to the grid (if existent) or another energy efficient[48] solution. The subcomponent will require that systems are resilient to climate change and create incentives in the design of the infrastructure for the adoption of technological innovation (e.g. solar panel, chlorine equipment, etc.) aiming to reducing costs, increasing resilience and the operational efficiency of the systems. Water sources availability and alternatives would be assessed before the design and implementation of subproject with support from COGERH and FUNCEME's data and expertise.

25. In addition, this subcomponent will support the construction of onsite sanitation structures – complete household sanitary kits (*módulos sanitários domiciliares - MSD*) or treatment units for existing sanitary kits - in the communities identified to receive new water systems[49]. Piloting of a new approach for families who desire to make improvements to existing sanitary kits based on demand using microcredit (via FEDAF) will be tested. MSDs would include water-flushed toilet, water tank, laundry, washbasin, shower, inspection box, and treatment using septic tank. Capacity building and behavior change activities will be carried out to promote hygiene, the rationale use of water and of the sanitary kits. Collection and treatment of the sludge will be tested using the SISAR scheme. Therefore, the operation of these sanitary kits is expected to be made climate-resilient through efficient water use.

26. **Prioritization of areas for interventions.** In order to reach the most vulnerable population in the State, to maximize the Project's impact, and to support the State in reaching the universalization of water supply, the following criteria were considered to focus the Project's interventions: municipalities that are classified as medium-high and high vulnerability using the Municipal Alert Index (*IMA – Índice Municipal de Alerta*[50]); and areas that are susceptive to desertification, classified by FUNCEME.

27. **Eligibility and prioritization criteria for selecting subprojects**. For all subcomponents, a set of specific prioritization and eligibility criteria were defined and included in detail in the POM (See POM Appendix 2 for reference). These will include aspects such as:

- Legal framework agreements with each municipality to allow for interventions in rural communities to take place for water and sanitation activities;
- Agreement from the community and from the municipal government to have SISAR provide the O&M support for the system and charge for the water supply and sludge management with support from local community operators;
- Water subprojects will need to reach all families within the community;

[46] Approximately 80% of financing is expected to support new systems.
[47] The rehabilitation of water infrastructure will explore opportunities to improve energy efficiency above the existing levels as well as improve the systems resilience.
[48] Above the existing energy efficiency levels and comply with high energy efficiency certification schemes.
[49] Costs for construction of onsite sanitation structures and treatment units for existing sanitary kits are estimated at USD 36 million.
[50] IMA. https://www.ipece.ce.gov.br/indice-municipal-de-alerta/ . An index based on 12 indicators related to social, agriculture production and meteorology aspects; measured every year for all 184 municipalities of the State. Four ranges are defined: low, medium-low, medium-high and high vulnerability.

- Subprojects that have better feasibility results (including cost, benefits, availability and quality of water sources and energy) and that reach more families, will be prioritized.

28. A detailed subproject cycle was agreed with the Client and partners and was included in the POM. SISAR will be strengthened with support from Component 3 to enable its continued support to communities to operate and maintain the water systems; and to implement a sludge management scheme. SISAR will be participating during the whole subproject cycle. Beneficiaries are expected to collect water supply tariffs and sludge management service tariffs. Counterpart financing from beneficiaries for capital cost would apply only to the microcredit piloting for improving existing MSDs.

Expanding water supply infrastructure.

29. **New water services will be identified based on demands from Component 1,** the needs of the communities benefitting from productive projects that do not have access to safe water supply for human consumption, and those communities that have not benefited from the previous Project. Availability and feasibility analysis and study; community awareness, mobilization and confirmation; and, engineering designs and works will be carried out. It is expected that this subcomponent will support the implementation of up to 20 water systems in rural communities, reaching around 2,400 households (9,000 people).

30. **New water services to be identified based on induced demand (up-down approach).** This approach will be sought to meet rural communities at scale that could be supplied by integrated water systems to be supplied using reliable water sources. In order to most effectively use existing water sources in the State and to promote economies of scale for rural water supply, this subcomponent intends to pre-identify existing and available bulk water sources in the State (with support from COGERH and FUNCEME) and promote the integration of rural communities within a defined distance to get connected to an integrated water system. Even in an up-down approach, expression of interests will be launched to confirm the participation of the communities, following clear prioritization and eligibility criteria.

31. SDA with its partners will identify (with support from COGERH) potential water sources that have availability to supply water to around 10 rural communities that could be potentially connected by an integrated water supply system. Availability and feasibility studies; community awareness, mobilization and confirmation; and, engineering designs and works will be carried out. It is expected that this subcomponent will support the implementation of up to three integrated water systems, connecting around 10 rural communities each, reaching around 3,600 households (13,600 people).

32. **New water services to be identified based on spontaneous demand (bottom-up approach).** This spontaneous demand will be based on community demand driven through responses to expressions of interest following the Project's prioritization and eligibility criteria. This approach is similar to the one implemented in the previous Project, but with an improved selection criteria that incorporates lessons learned from the previous Project (e.g. regarding the legal commitment from the communities and municipality to the Project and to SISAR supporting the O&M), and prioritization criteria to focus on the most vulnerable areas of the State. Communities with more than 50 families will be targeted.

33. Screening procedure; availability and feasibility studies; community awareness, mobilization and confirmation; and, engineering designs and works will be carried out. It is expected that this subcomponent will support the implementation of up to 75 water systems in rural communities, reaching around 9,000 households (34,000 people).

34. **Rehabilitation of water supply systems to be identified based on demand from SISAR,** from the interest of this entity in systems to be requalified to improve SISAR's sustainability and economies of scale. SISAR will identify communities in the eight regional SISARs to have systems rehabilitated and receive the O&M support from SISAR. The Project's prioritization and eligibility criteria including, among others, the number of beneficiaries, water reliability and better cost-benefit analysis will be used to select the communities to benefit from the Project support. It is expected that this subcomponent will support the implementation of up to 40 water systems in rural communities, reaching around 10,000 households (37,800 people).

Expanding basic sanitation infrastructure.

35. The lessons learned in the implementation of the MSDs during the PSJ III project showed that there should be a more rigorous identification of the beneficiaries, as well as a need to expand the service options in order to rationalize investments and obtain greater benefits. In addition, there is need for strengthening social activities to support changes in behavior related to the use and maintenance of the MSDs. Availability and feasibility analysis; community awareness, mobilization and confirmation; behavior change activities and, engineering works will be carried out. It is expected that this subcomponent will support the implementation of sanitary kits or treatment to around 5,250 households (19,845 people).

36. In this sense, the following activities are proposed in the project:

(a) support the construction of onsite sanitation structures – household sanitary kits (M*ódulos Sanitários Domiciliares*); and treatment units for the existing sanitary kits in the communities identified to receive new water systems. Beneficiary families will be selected according to defined eligibility and prioritization criteria. Expressions of interest presented in response to water supply systems will serve as a basis for screening communities.

- **For new household sanitary kits -** The Project will benefit only those cases where there is no sanitary installation inside the home or the existing MSD is very precarious.
- **For treatment units only.** Households that already have MSDs, but without adequate sewage treatment, will be supported with a septic tank installation following the Project's standard.

(b) Piloting of a new approach to improve existing MSDs on demand using microcredit (via FEDAF) will be tested. For households that have some sanitary installation inside the property, improvements would be offered but its financing will be returned through microcredit to be operated via FEDAF and its eligibility will be to have service by a water supply system. SDA and its partners are expected to identify two communities as pilots to access the credit line to improve the sanitary kits, one supported by Sao Jose III Project and another by the proposed Project; one nearby and another larger community. The improvements could include tile placement, changing showers, hydraulic parts, tanks, among others. Monitoring of selection process, implementation and results will be carried out by SDA. Lessons learned would allow for further replication and scale up in the State.

37. **Subcomponent 2.2: Water Security and Resilience (US$3.96 million; IBRD loan US$2.64 million).** The subcomponent will finance the implementation of water reuse systems for rural development production in response to the demands of Component 1 (as indicated by the environmental management or business plans); as well as the promotion of activities aimed at the recovery and conservation of water sources (small reservoirs, river banks etc.)

surrounding areas for communities who benefited from water supply interventions. It is expected that a total of about 200 families will benefit from implementing water reuse systems. The main types of interventions are:

(a) **Demand for reuse generated by the water needs of productive projects contemplated in Component 1.** The success of the pilot reuse units in PSJ III showed that the implantation of this technology can be extended to a greater number of beneficiaries. The knowledge of new experiences beyond that tested by PSJ III, as well as that conducted by SDA in Quixeramobim, indicates that the typologies to be used in the proposed project should be expanded. The proposed project will support individual beneficiaries or organizations benefiting from Component 1 for the reuse of wastewater. The reuse will benefit single - family or multifamily (to be tested) and will include reuse of grey water by installing, inter alia, collection and treatment (e.g. bio-waters - filter, myocardium, composting area, mini-stand, reuse tank, simplified filter, distribution) depending on the flow produced, community density, number of households and family members, and production demand.

(b) **Demand for environmental conservation or protection of water sources.** In order to improve the quality, sustainability and resilience of water sources that are essential for water supply systems, this subcomponent will support activities to recover riparian forests close to reservoirs, springs, rivers (by installing fences, planting seedlings, etc.) in communities of beneficiaries of water supply systems. Up to 45 communities are expected to be supported by these interventions.

38. **Component 3 – Institutional Strengthening and Project Management (US$31.41 million; IBRD loan US$20.86 million).** The objective of the component is to strengthen the organizational, management, knowledge and operational capacity of key implementing institutions, as well as overall Project Management.

39. **Subcomponent 3.1. Institutional Strengthening and Capacity Building (US$13.04 million; IBRD loan US$8.69 million).** Given the strategic role of SDA, EMATERCE CAGEGE, SOHIDRA, SISAR, and TCE for the implementation of Components 1 and 2, the Project will support key activities to strengthen these agencies' strategic and operational capacity.

40. More specifically, the project will provide the following support to the key selected agencies:

(a) **SDA.** The project will support the consolidation of the SDA's management system, as well as information on the economic and structural activities in rural areas. As such, an information portal should be available for citizens and various levels of stakeholders. The portal should be based on the transparency law, and transparent information about project beneficiaries should be easily available. The UGP will hire specialized consultants to prepare a plan for the restructuring and strengthening of UGP, in accordance with the new more diversified tasks, and the rationalization of the allocation of its human resources (central and in the deconcentrated offices). This is expected to lead to a more efficient coordination function, thereby increasing SDA's performance and taping into potential economies of scale.

(b) **EMATERCE.** The subcomponent will support the restructuring process of EMARTECE with the aim to improve its structure and technical management to allow EMATERCE to more effectively fulfill its official role in the state of Ceará. The definition of programs (and respective guidelines), projects and actions will contribute to: (a) align the strategy of action of the institution with the strategy proposed by the project; (b) review the management structure and workforce; (c) establish technical guidelines for programs that respond to different regional and territorial needs; (d) identify staff training needs; (e) Initial preparation of the new

technical framework; (f) establishment of management systems and monitoring and evaluation for programs and projects.

(c) **SISAR.** The project will support strengthening SISAR's capacity for giving support to communities in managing, operating and maintaining community-led water systems. This will include, inter alia, the preparation of training material, capacity building events, acquisition of goods, and developing specific studies. The Project will also support the piloting of a management scheme for sludge management in coordination with SISAR and CAGECE; and the implementation of multi-community solar panel schemes to support water pumping [51].

41. The component will also support other partner institutions providing support and technical assistance in specific aspects of project implementation according to their areas of responsibilities and their individual skills and competencies. These relations will be formalized through Cooperation Agreements to be signed between SDA and each institution, which will include their roles under the Project, the activities to be covered by the Project's funds, and their responsibilities, including their need to adhere to the Bank's safeguards and fiduciary policies and procedures. The main agencies will include: TCE, CAGECE, SOHIDRA, IPECE, FUNCEME, COGERH and Secretariat of Cities.

42. **Subcomponent 3.2. Project Management and Supervision (US$18.37 million; IBRD loan US$12.16 million).** The Project will continue to be managed by the UGP, mapped to the State Secretariat of Agrarian Development (SDA), established under the São José III Project. The existing institutional arrangement was reassessed and adjusted during preparation to meet the implementation needs of the proposed operation. The subcomponent will support the overall project management/coordination and implementation of all three components, including the following aspects: (i) inter-institutional coordination, (ii) activity monitoring, evaluation and impact assessment; (iii) fiduciary administration, internal controls and audits; (iv) environmental and social safeguards management and implementation; (v) a citizen's engagement mechanism, (vi) project-related studies and pilots, and (vii) communication and outreach strategy. The subcomponent will also support the coordination of sectorial agencies, relevant to the implementation of the State's programs and policies supported under the project.

D. Beneficiaries (see Appendix 1 to this Annex).

43. **Component 1.** The general definition of key direct beneficiaries is the group comprising family farmers' households and smallholder producers organized in different forms of Producer Organizations (PO), such as community associations, cooperatives, producer associations, etc. The project intends to empower their organizations in order to identify, prioritize and manage vulnerability reduction and productive subprojects, respectively. The proposed operation is designed to enhance market opportunities through an inclusive, beneficiary-led, market-driven approach. At the same time, the general rural population will directly benefit from improved access to water services (water for human consumption and basic sanitation). Women and young people will be priority beneficiaries, especially in training activities.

44. Within Component 1, Subcomponent 1.1, is expected to finance investments in the strategic productive chains for increasing competitiveness, income generation and climate resilience. Direct beneficiaries are organizations of

[51] Both pilots sum up to an estimated cost of USD 1.63 million.

family farmers[52] within the prioritized municipalities, at least 70 percent of whose members have individual DAP[53], land ownership, and enabling documentation allowing to a legal use of land for productive purposes (additional criteria will be defined on the POM). Also, the subcomponent will support organizations already being supported by the Ceará State but are in need of technical assistance to guarantee the sustainability of investments already made. The thematic focus of this assistance includes climatic resilience at the productive level, market access and enterprise management, and investments in clean technologies. As for Subcomponent 1.2, direct beneficiaries within prioritized municipalities for productive and social investments are the priority groups that meet the requirements to be classified as such (expanded in the POM).

45. **Component 2**. Direct beneficiaries consist of rural populations directly benefiting from improved access to water and onsite sanitation infrastructure investments, and access to wastewater reuse infrastructure for production. Specific eligibility criteria per type of investments has been based on the expected demands under each subcomponent (See Annex 2 for more details, including prioritization criteria within each eligible group). The beneficiary population would include those who live in areas that: (i) the IMA is in the "High" and "Medium High" bands; (ii) the Municipality approves that the works are carried out; (iii) the SISAR's legal framework is in place (including community membership in the management of SISAR and the City Hall); (iv) there is availability of water sources; and (v) proposed subprojects would contemplate the universalization of the water supply in the localities. The component is expected to directly benefit up to 25,000 households (94,500 beneficiaries) with water supply systems for human consumption (including around 2,400 family farmers from Component 1), including implementation of sanitary kits (MSD) to around 5,250 of these households. In addition, it will directly benefit a portion of the family farmers of Component 1 by supporting the implementation of gray reuse infrastructure for production in 200 family farms. Women and young people will also be priority beneficiaries, especially in training activities for operation and management of water systems.

46. **Component 3.** Direct beneficiaries include staff who will directly benefit from capacity building activities geared towards public institutional strengthening.

47. Finally, indirect beneficiaries include: (i) private agribusiness enterprises and government entities who may enter into partnerships with producers under business alliances; and (ii) the entities that may participate in and manage state-wide services promoted by the project. Special efforts will be made to ensure women, youth, *Quilombol*as, and Indigenous groups are adequately informed of project procedures and benefits to promote their participation. No identifiable group will be negatively affected by project activities.

48. **Gender Strategy**. Through its targeting of beneficiaries, institutional strengthening activities, and farm level interventions, the Project will pay attention to ensuring equitable opportunities for women family farmers. The project's gender strategy is organized in three main axes: (a) Support for the productive inclusion of groups of rural women farmers – which is expected to reduce economic gaps. Special incentives for matching grants that target female farmers, such as additional scores for prioritizing matching investments proposals, will be in place; (b) Improving access to water - reducing gaps in health and time use in domestic activities; (c) Gender sensitization - which

[52] According to Law No. 11.326 / 2006, family farmers and rural family entrepreneurs are defined as those who practice activities in rural areas, have an area of up to four fiscal modules, depend on family labor, and their family income is linked to the establishment and self-management of the family enterprise. Foresters, fish farmers, extractivists, fishermen, natives, Quilombolas and land reform settlers are also considered family farmers. Family farmer organizations are defined as Representative Beneficiary Entity (ERB) and for the scope of this operation are limited to association and cooperatives.

[53] The DAP is the declaration of suitability for accessing the National Program for Family Farming, a document that identifies family agriculture and can be obtained both by farmers and family farmers' enterprises, such as associations, cooperatives, or agro-industries. The DAP can be obtained by those filling the criteria defined by the Law 11.326, dated July 24, 2006: family farmers; agrarian reform settlers; beneficiaries of the National Land Credit Program (PNCF); *quilombolas*; indigenous peoples; artisans / rural tourism; fisherfolk; fish farmers; forest dwellers (farmers and gatherers).

aims to reduce gender-based violence and allows an environment for economic improvement, health, time use and women's participation.

49. **Youth Strategy**. The project will pay special attention to rural youth. They will be the priority beneficiaries for professional training activities, mainly to occupy roles in the management of the organizations supported. The strategy for youth consists in the realization of professional training in three modules. The first module will support young people to develop their skills of associativism and cooperativism. The second module will develop their management skills and technological innovation, and the third module will develop entrepreneurship and marketing skills. At the end of the training, the Project will also support Entrepreneurship proposals presented by young people with micro credits that will be accompanied by technical assistance. The design of the strategy will be compatible with the investments made so that the young people are integrated into the activities carried out in their communities and integration with families to ensure support for young people and facilitate family succession.

E. Project Cost and Financing Arrangements

50. Total project cost (including all price and physical contingencies) is estimated at US$153.53 million, comprising an IBRD loan of US$100 million and a local counterpart contribution of about US$53.53 million (in cash, US$50 million from the State government and the remaining US$3.53 million from Project beneficiaries). Detailed project costing and financing arrangements are presented in the following table.

BRAZIL
Ceara Rural Sustainable Development and Competitiveness Project - PSJ IV

Cost by Components and Financiers (in US$ million)

Components/Subcomponents	The Government of Ceará		The World Bank		Beneficiaries		Total
	Amount	%	Amount	%	Amount	%	Amount
1. Sustainable Economic Inclusion							
1.1 Strengthening Organizations for Enhanced Market Access	18.94	31.4	37.88	62.9	3.42	5.7	60.24
1.2 Improving Social and Productive Inclusion of Vulnerable Groups	2.83	33.1	5.65	66.2	0.62	0.7	8.55
Component Subtotal	21.77	31.6	43.54	63.3	3.48	5.1	68.79
2. Rural Water Supply and Sanitation Access							
2.1 Expanding Water Access and Sanitation Access	16.36	33.3	32.72	66.6	0.56	0.1	49.13
2.2 Increasing Water Security and Resilience	1.32	33.3	2.64	66.7	-	-	3.96
Component Subtotal	17.67	33.3	35.35	66.6	0.56	0.1	53.09
3. Institutional Strengthening and Project Management							
3.1 Institutional Strengthening and Capacity Building	4.35	33.3	8.69	66.7	-	-	13.04
3.2 Project management and supervision	6.21	33.8	12.16	66.2	-	-	18.37
Component Subtotal	10.56	33.6	2.86	66.4	-	-	31.41
Front end fee							
Front end fee	-	-	0.25	100.0	-	-	0.25
TOTAL	50.00	32.6	100.00	65.1	3.53	2.3	153.53

Annex 2 - Appendix 1
Beneficiaries Eligibility and Prioritization Criteria for Components 1 and 2

Component	Territorial Focalization Criteria	Eligibility Criteria	Prioritization Criteria	Beneficiaries
COMPONENT 1 Subcomponent 1.1: Strengthening Organizations for Enhanced Market Access	Geographic municipal prioritization based on the juxtaposition of following parameters:(i) existence of strategic[54] value chains; (ii) Municipal Alert Index[55] above 0.72; (iii) desertification risk and water availability; and (iv) presence of producers' organizations.	According to Law No. 11.326/2006, family farmers and rural family entrepreneurs are defined as those who practice activities in rural areas, have an area of up to four fiscal modules, depend on family labor, and their family income linked to the establishment and self-management of the family enterprise. Family farmer organizations are defined as Representative Beneficiary Entity (ERB) and for the scope of this operation are limited to associations and cooperatives. **Specific eligibility criteria:** - Individual DAP at least 70% of ERB beneficiaries - Land ownership - Enabling documentation - Additional criteria will be defined on the POM based on the type of enterprise to be financed (e.g. productive, agroindustry, rural tourism, handicrafts) Farmers participating in a subproject and without a DAP, will not be eligible for receiving individual funding for on-farm investments. This subcomponent also includes the implementation of pilot agro-silvo-pastoral management plans in selected organizations (about 80 subprojects). These plans pursue the rehabilitation of degraded areas of the Caatinga including ciliary vegetation (regeneration and/or planting), forage production (palm, sorghum, grass), pasture management, etc.), fences for protection of degraded areas and for legal reserve conversion. The POM will include the methodology to be used for the diagnosis.	- Participation of youth and women members in the organization; - Potential for job creation - Adoption of technologies (and practices) that promote climatic resilience; - Defined markets and marketing channels; - Current expertise for proposed activity, - Have been served by other projects and key constraints have been identified for efficient operation.	390 subprojects 11,750 direct Household beneficiaries

[54] Value chain selection will based on the following criteria: i) high predominance of family farmers already active at the production level; ii) market opportunities to increase farmers' income; iii) adequacy with climatic conditions, use of natural resources, lower water production requirements and potential for territorial development; iv) high potential to develop geographical branding through products and services; v) potential to create new jobs in rural areas (and across the value chain), particularly for women and youth.

[55] The Municipal Alert Index Series (IMA) of the Research and Economic Strategy of Ceará (IPECE) is calculated for the 184 municipalities of State of Ceará from a set of 12 indicators, which capture climatic, agricultural and social vulnerabilities using meteorological, agricultural production and social assistance indicators. According to the IMA of 2018, the municipalities with highest vulnerability rate are: Monsenhor Tabosa, Deputado Irapuan Pinheiro, Boa Viagem, Piquet Carneiro, Parambu, Catarina, Solonópole, Saboeiro, Araripe, Tauá, Mombaça, Milhã, Jaguaribe, Independência, Madalena, Campos Sales, and Paramoti. For more details see *https://www.ipece.ce.gov.br/wp-content/uploads/sites/45/2018/09/IMA_2018.pdf*

Subcomponent 1.2: Improving Social and Productive Inclusion of Vulnerable Groups	Same definition of priority geographical areas, but targeting vulnerable groups, including *Quilombolas*, indigenous peoples, and others.	Priority groups within prioritized municipalities that meet the following requirements: - Indigenous Peoples and Traditional Communities (e.g. *Quilombolas*); - Legal Recognition and authorization of pertinent bodies - Proof of peaceful occupation - Water viability meets eligibility criteria defined under component 2 - Tax compliance - Only farmers with DAP will be eligible for receiving funding for their individual on-farm investments.	- Greater number of youth and women - Have active productive activity / production diversity - Activities related to the prioritized value chains - Faced significant constraints for their development.	40 subprojects 1,250 direct household beneficiaries
COMPONENT 2 Subcomponent 2.1: Expanding Water and Sanitation Access	Water Supply System - Demand from Component 1	IMA in the "High" and "Medium High" bands; Municipality's approval for works; SISAR's legal framework (including community membership in the management of SISAR and the City Hall); projects that contemplate the universalization of the water supply in the localities; a minimum of 50 families (systems below 50 families only with feasibility study on management by SISAR); approved business plan and/or in implementation.	Worst desertification index; not been benefited by water supply system from previous Bank Projects; greater number of families benefited; water capacity of proven source and availability of energy.	2,400 households beneficiaries. (20 water supply systems for up to 9,000 beneficiaries)
	Water Supply System- Induced Demand (Integrated System)	IMA in the "High" and "Medium High" bands; Municipality's approval for works; SISAR's legal framework (including community membership in the management of SISAR and the City Hall); area of influence of the water source (area to be defined by the feasibility study); subprojects that contemplate the universalization of the water supply in the localities.	Worst desertification index; greater number of communities to join the integrated systems; better feasibility results.	3,600 households beneficiaries. (30 water supply systems for up to 13,600 beneficiaries)
	Water Supply System- Spontaneous Demand	IMA in the "High" and "Medium High" bands; Municipality's approval for works; SISAR's legal framework (including community membership in the management of SISAR and the City Hall); projects that contemplate the universalization of the water supply in the localities; a minimum of 50 families (systems below 50 families only with feasibility study on the management by SISAR).	Worst desertification index; greater number of families benefited; water capacity of proven source and availability of energy; engineering designs approved by CAGECE/SOHIDRA and SISAR	9,000 households beneficiaries. (75 water supply systems up to 34,000

				beneficiaries)
	Rehabilitation of Water Supply System	SISAR identifies and SDA analyzes feasibility; consent of the municipality for the works; SISAR's legal framework (including community membership in the management of SISAR and the City Hall); subprojects that contemplate the universalization of the water supply in the localities; defined ceiling for the total cost to carry out the requalification; maximum of 1,250 connections per SISAR or at most 10,000 for all SISAR's together.	Greater number of families benefited; proof of water source capacity and greater benefit-cost ratio.	10,000 households beneficiaries. (40 water supply systems up to 37,800 beneficiaries)
	Domiciliary Sanitary Modules and/or Sewage Treatment	Be covered by water supply systems in the proposed operation; agreement per household to the payment of the sewage treatment tariff; Municipality's approval for works; SISAR's legal framework (including community membership in the management of SISAR and the City Hall).	Subprojects that contemplate reaching the largest number of families	5,250 households beneficiaries
	Microcredit Pilot for Improvement of Sanitary Modules	Be covered by a water supply system; term of adhesion per household to the payment of the sewage treatment tariff; criteria set out in FEDAF legislation.	Not applicable	Two communities as pilots (estimated around 60 household beneficiaries)
Subcomponent 2.2: Increasing Water Security and Resilience	Reuse	Entity or individual producers benefiting from component 1 for the reuse of grey water.	Water use by type of agricultural activity; number of families	200 household beneficiaries
	Environmental conservation or protection of water sources	Communities with water supply systems; and/or communities that meet the eligibility criteria of component 1	Greater number of families	45 communities

ANNEX 3: Fiduciary Aspects (Financial Management and Procurement)

COUNTRY: Brazil
Ceará Rural Sustainable Development and Competitiveness Phase II

Financial Management Arrangements.

Institutional Arrangements and Staffing.

1. The Project Implementation Unit, *Unidade de Gerenciamento do Projeto* (UGP), will be maintained at SDA. The UGP will oversee the management, coordination, monitoring and evaluation of all Project activities, and will undertake the primary fiduciary responsibilities for the Project. These responsibilities include: (i) preparing and obtaining approval of Project FM arrangements; (ii) coordinating and supervising Project implementation by all project executors; (ii) preparing and submitting Project interim unaudited financial reports (IFRs) for monitoring to the Bank; (iv) preparing and providing all financial documentation and Project reports requested by external auditors and Bank staff; and (v) preparing, updating and ensuring that Project Operational Manual (POM) is observed. Detailed staff duties and tasks will be included and detailed in the POM.

2. **Agropolos.** The Agropolos Institute of Ceará was recognized as a non-for-profit social organization (OS) on March 7, 2002 by the State Decree No. 26,528 and updated by State Decree No. 29,320 of June 12, 2008, that together with specific State law and rules, sets out its purposes to promote the State's economic and social sustainable development through fostering and qualifying public policies. Agropolos will provide support for all the project components, mainly hiring staffing and consultants to work on the project. Agropolos participated in the previous Bank funded operation Ceará Rural Sustainable Development and Competitiveness (P121167). Agropolos' institutional arrangements were assessed and considered adequate to implement the project.

3. *Staffing:* The UGP team is composed of public servants and some staff will be hired through Agropolos, contracted through a competitive process. The UGP team has an adequate background to implement the project, sufficient capacity to fulfill its FM responsibilities and is adequately exposed to the Bank's FM procedures having adequately implemented previous Bank's financed operations. However, based on previous project lessons learned, to mitigate implementation delays, at least two dedicated qualified FM staff (at least one should need be a public servant) need to be identified as part of the UGP, no later than one month after effectiveness. These staff members will, amongst other tasks, be responsible for supporting Project implementation, specially at the subproject level, to avoid implementation delays.

Planning and Budgeting.

4. The budget cycle includes planning and implementation of all government activities, which are to be reflected in the PPA, LDO and LOA[56]. The State's budget process is clearly defined, follows Law 4.320/64 and is in line with IPSAS standards. The procedures in place to plan Project activities and prepare related budgets and to collect information from the other project executors in charge of the different components is functioning satisfactorily.

5. Agropolos' budget cycle includes standard planning and budgeting of all activities. To fulfill its' mandate, funds are transferred from the State annual budget law (LOA), to Agropolos, through the line Secretariat SDA.

[56] PPA–Plano Pluri-Anual, LDO-*Lei de Diretrizes Orçamentárias*, LOA–*Lei Orçamentária Anual* which includes the Government's goals and programs that are approved by State Legislative Assembly every five years, 18 months, and 12 months, respectively.

Accounting.

6. The State has satisfactory accounting arrangements controlled through S2GPR. The State of Ceará follows: (i) the Brazilian Accounting Standards Applicable to the Public Sector (*Normas Brasileiras de Contabilidade Aplicadas ao Setor Público*-NBCASP); (ii) Law 4,320/64, that establishes certain high-level accounting principles (*Normas Brasileiras de Contabilidade*-NBC); and (iii) the Accounting Manual Applicable to the Public Sector (*Manual de Contabilidade Aplicada ao Setor Público*-MCASP) issued under Law 10,180 of February 6, 2001 and Decree 3,589 of September 6, 2000. Both the NBCASP and MCASP were revised via *Portaria* STN 467 of August 6, 2009 and updated in 2013 to incorporate the text of the International Public-Sector Accounting Standards (IPSAS), with adaptations for the Brazilian reality. There is a work plan (National Treasury Secretariat (STN) Ordinance Implementation Plan n° 548/2015) in progress, that will culminate in the convergence of 35 IPSAS currently in force by 2023; with the STN subsequently verifying the data of the respective entities of the Federation, by the year 2024. The State is following the National Treasury's (STN) NBCASP new implementation schedule. Transactions under the Project will be accounted for on a cash basis, for disbursements, reporting and auditing purposes.

7. Agropolos is subject to the rules, policies, and procedures issued by the National Federal Accounting Council (*Conselho Federal de Contabilidade)* and is governed by the Federal Law 6,404/76, of December 15, 1976, updated by Laws no. 11,638 /2007 and 11,941 / 2009, that are aligned with international accounting standards and International Financial Reporting Standards. For project purposes, Agropolos will maintain the accounting records of the transactions executed under its respective control using its own corporate system (Fortes), which will be used as the Financial Management Information System. Information from Fortes will be reviewed and approved by SDA, before being migrated and automatically captured by the State Administrative System S2GPR on a quarterly basis. An equivalent to a ledger account and a fund number will be created to account and record all loan transactions. All project contracts (including those that will be accounted as counterpart funds) will be associated to the project, thereby enabling the tracking of all sources and uses of funds, which will be reconciled with the monthly budget execution report sent to SDA. The Bank evaluated the robustness of Fortes system and concluded that it can provide financial information for the purposes of supporting the Bank-financed Project. However, the Fortes system will need to be fully integrated and customized to export the respective financial information to S2GPR. This step is required to be completed not later than one month after effectiveness.

Internal Controls/Internal Audit.

8. Although SDA will hold the primary fiduciary responsibilities for the project and UGP staffing is appropriate to assure segregation of functions and reconciliations of accounts, Agropolos will also need to ensure a proper FM and control environment.

9. For the State project executing agencies, all project budgeting and accounting transactions will be processed through S2GPR. The first payments step commitment (*empenho*) is approved by the UGP, acquisition, verification and certification (*liquidação*); and final payment (*pagamento*) is made by SEFAZ (Secretary of Finance). The approval and authorization controls are adequate to approve budget transfers/allocations and will be described in the Project Operational Manual (POM). For Project purposes, they will be reconciled with budget and procurement reports monthly.

10. For Agropolos, all their project budgeting and accounting transactions will be processed through Fortes. All payments will follow acquisition, verification of invoices (*provisão*), and payment (*pagamento*) routine. All transaction processing (recording annual budgets, budget commitments and payables, authorization of payments; and internal control reviews) will be carried out by Agropolos, who will execute payments and control the respective segregated

project operational bank account. These functions will be carried out by the Accounting and Finance Departments of Agropolos. Internal controls procedures will be detailed in the POM and will follow the Agropolos established routines.

11. The *Controladoria Geral do Estado do Ceará* – CGE is the unit responsible to support the State's direct and indirect agencies on legal procedural compliance for contracting public expenditures and complying with the public information access law. Therefore, for Project purposes, the CGE will be responsible for the internal audit compliance related functions and certain aspects of internal control.

12. Agropolos has an internal audit unit (IAU) that is properly staffed and that reviews all contracts phases. The project will be included in Agropolos' IAU annual audit plan, throughout the project's life, through reviewing all bidding processes and financial execution of contracts.

13. There is also an adequate system for protecting the Project's assets from fraud, waste and abuse. Assets purchased will be listed in an inventory record, using the State asset system (*Sistema Integrado de Gestão de Bens Móveis e Sistema Integrado de Bens Imóveis (SGBM-CE e SGBI-CE*) and at Fortes. Each asset is given an individual master record and number. A physical inventory control is performed at the end of each fiscal year for these assets and reconciled with the respective control accounts annually.

14. The Project's internal control system will be documented in the POM that will comprise descriptions, flow charts, policies, templates and forms, user-friendly tools, tips and techniques to ensure that the approval and authorization controls continue to be adequate and are properly documented and followed with adequate safeguarding of the Project's assets (including the following topics in the FM and Disbursements section: flow of funds, chart of accounts, Project organizational structure and responsibilities, oversight lines, authority limits, internal and external audit arrangements, accounting practices, disbursement procedures and the financial reporting arrangements). The POM should be prepared by the PIU and be approved by the Bank and be maintained/updated throughout the Projects' life.

15. During the previous' project execution, weaknesses were identified related to: (i) delay in the execution and documenting the use of funds by the community association sub-projects and providing respective supporting documentation; and (ii) changes to Agropolos institutional administrative processes were not fully implemented[57]. Mitigating measures to address these deficiencies, for the proposed project include: (i) ensuring regional offices are properly staffed to provide timely support to the subprojects, including use of the asset management system, to ensure that the control process is extended to the local level; and (ii) Bank's fiduciary staff, TCE's and SEPLAG's support to guide prioritization of the most suitable activities that need to be implemented to tackle fiduciary weaknesses in Agropolos throughout project life.

16. All implementing agencies shall also observe the Bank's Guidelines on Preventing and Combating Corruption in Projects financed by IBRD and IDA credits and Grants, dated Oct 15, 2006 and Revised in January, 2011, that set the general principles, requirements and sanctions applicable to persons and entities which receive, are responsible for the deposit or transfer of, or take or influence decisions regarding the use of the loan proceeds. SDA and Agropolos staff must observe the highest standard of ethics and take all appropriate measures to prevent and refrain from engaging in sanctionable practices. SDA and Agropolos must report allegations of fraud and corruption in connection

[57] Activities include: (i) integration of Agropolos corporate Financial Management and Information System (FORTES; (ii) strengthening the internal control unit (e.g.: internal audit functions, ombudsman's office and upgrade of the transparency portal); (iii) adoption of the risk management and the M&E performance-based indicators to achieve institutional objectives; (v) review current HR policies and procedures, including TOR for all positions (including the high managerial) administrative reorganization, to in order to ensure independence and improve governance.

with the use of the loan proceeds, maintain appropriate fiduciary and administrative arrangements, cooperate with Bank investigations, taking timely and appropriate action to address the problem, and follow other applicable government and corporate related rules and guideline.

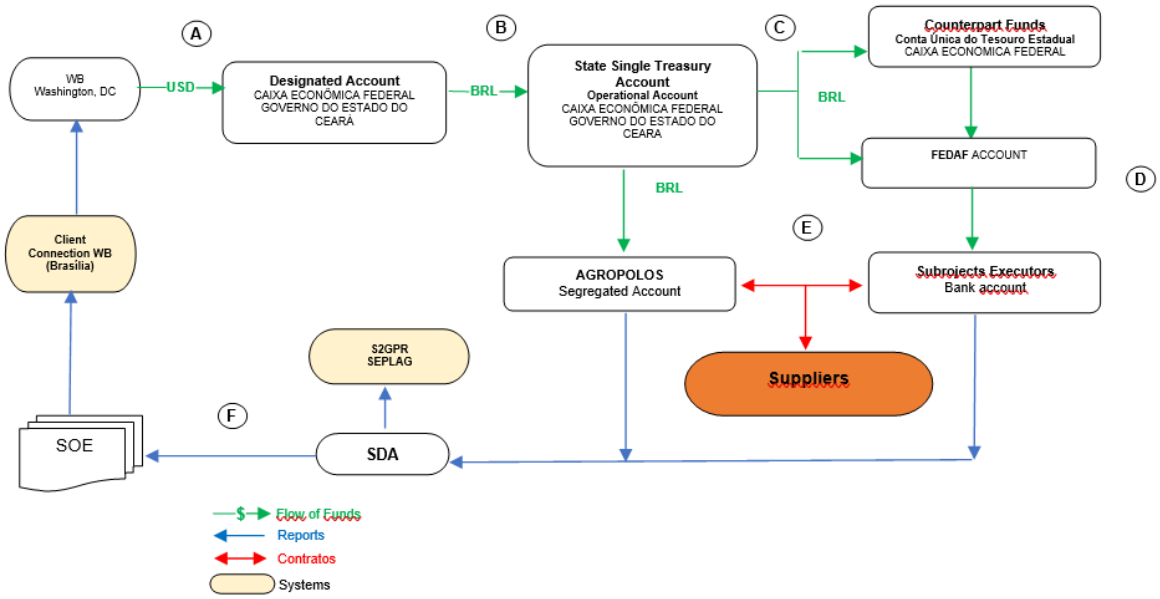
Financial Reporting and Monitoring.

17. S2GPR can adequately control, account for, report on, and manage the proposed loan's financing. The system can provide FM data to prepare respective reports in local currency (BRL) and USD (for purposes of documenting the DA), which are prepared for Bank purposes on a cash-basis (although the State follows accrual accounting). A specific cost center will be created in the system to record all loan transactions and will be aligned with the structure of the loan to record transactions by category and component/subcomponent. Agropolos' respective implementation will be electronically migrated to S2GPR (IFR module). The UGP will ensure the timely production of semester IFRs and be submitted to SDA for further submission to the Bank, within 60 days after the end of each semester. S2GPR must be customized not later than one month after effectiveness to automatically produce the reports needed for Project monitoring and reporting.

18. Accordingly, the format and content of the IFRs will cover the following items:

a. IFR 1A - Sources and Uses of Funds by disbursement category cumulative (project-to-date, year-to-date, and for the period) versus actual expenditures, including a variance analysis.
b. IFR 1B - Uses of Funds by Project Component and subcomponent, cumulative (project-to-date, year-to-date, and for the period) versus actual expenditures, including a variance analysis.
c. IFR 1C - Designated Account bank reconciliation (as appropriate).

Funds Flow and Disbursement Arrangements.



19. The disbursement of Project funds will be processed in accordance with Bank procedures as stipulated in the Legal Agreement and in the Disbursement and Financial Information Letter (DFIL). Funds will be disbursed in respect of

eligible expenditures incurred or to be incurred under the Project and will be disbursed in accordance of agreed financing percentages.

20. The proposed funds flow and disbursement arrangements were considered satisfactory and will be streamlined within the project to facilitate execution, avoid unnecessary incremental operational arrangements and rely as much as possible on Public Financial Management (PFM) country systems.

21. The following disbursement methods will be available: Advance, Reimbursement and Direct Payment. Disbursements will be made primarily based on Advances. The DA maximum amount (i.e. Fixed Ceiling) that may be advanced is USD 15,000,000. Subproject expenditures will be documented to the Bank, based on actual expenditures incurred by the subproject executors. For Advances and Reimbursements, disbursements will be documented based on SOEs. Direct Payments will be documented by Records.

22. The Secretariat of Finance (*Secretaria da Fazenda,* SEFAZ) will open a segregated DA in US dollars in *Caixa Econômica Federal* (CEF) New York, in the name of the State of Ceará to receive loan funds, process disbursements in US dollars and then transfer funds into local currency (Brazilian Reais, or BRLs) operational account (also maintained in CEF in Fortaleza) to process local currency payments. The frequency for reporting eligible expenditures (including the Statement of Expenditures) paid from the DA will be quarterly.

23. SDA will be responsible for instructing the State Treasury to make all payments for works, goods, services, subprojects (including reimbursements to FEDAF[58] account) once payment obligations have been incurred and properly documented. S2GPR requires that funds be committed by source, enabling the tracking of loan disbursements to project expenditures). Such arrangements are considered appropriate and have the necessary segregation and level of approvals and can speed up implementation.

24. In the case of Agropolos: funds will be advanced from the DA to the separate segregated operational account opened by Agropolos in BRL to cover their project expenses for a three-month period. Agropolos will submit a monthly reconciliation implementation report to the UGP. Every quarter a new advance will be provided to Agropolos based on the reconciliation report and the forecast report.

25. The subproject monitoring system – SIGAF *(Sistema de Gestão para a Agricultura Familiar)* will be used by all subprojects beneficiaries to account and monitor physical and financial implementation. The system has been reviewed and considered satisfactory. In case of subprojects there are two possible flow of funds:

a. **Advances made by SDA to the Subproject**: (i) SDA allocates funds to be executed and updated in S2GPR, based on subproject budget estimates and POAs; (ii) a subsidiary financial agreement (*Convênio de Financiamento*) would be signed between the subproject executor and SDA to receive funds in a bank account opened for the subproject and setting out other payment clauses; (iii) SDA reviews, monitors and approves the requests for payments to the subproject executors (upon provision of the full documentation of any previous advances/payments made to the subproject executor); (iv) new advances to the subproject executors are made.

[58] FEDAF – State Fund to support the agricultural families. Is a permanent revolving accounting and financing fund, created through the complementary Law 66, of January 07, 2008, and Decree 29.542 as of November 18, 2008, linked to SDA, to support the agricultures rural families. Is mainly capitalized by the State and municipalities of Ceará, transfers from the Federal Union, Loans and contributions from national and international organizations.

b. **Reimbursements made by SDA to FEDAF:** (i) SDA allocates funds to be executed and updated in S2GPR, based on subproject budget estimates and POAs and sends the list of approved subproject financing requests to FEDAF; (ii) the financing entity (accredited bank) signs the subsidiary financial agreement (*Convênio de Financiamento*) with the subproject executor and opens a specific bank account for the subproject; (iii) SDA and FEDAF review, monitor and approve the requests for payments to the subproject executors (upon provision of the full documentation of any previous advances/payments made to the subproject executor); (iv) FEDAF authorizes the financing institution to transfer funds from its' account (i.e. FEDAF's bank account) to the subprojects beneficiaries' account and submits agreed monitoring and financial reports to be approved by SDA; (v) SDA updates S2GPR and SIGAF, and reimburses FEDAF from the operational account.

26. **Retroactive financing** will be allowed for all components of this Project up to an aggregate amount not to exceed USD20,000,000 to be made for payments up to 12 months before the signing date of the loan agreement for eligible expenditures but no earlier than January 1st, 2019.

27. The loan will also have a four-month grace period after the closing date, during which the World Bank will accept withdrawal applications relating to project transactions incurred before the closing date. The Loan will have a Minimum Application Size equivalent of US$400,000 of the outstanding advance to the Designated Account for Reimbursements and Direct Payments. All disbursement details will be reflected in the DFIL. The table below specifies the categories of eligible expenditures that may be financed out of the proceeds of the loan.

Allocation of Loan Proceeds and Disbursement Categories

Disbursement Categories	Amount of loan allocated (US$)	Percentage of Expenditures to be Financed (inclusive of taxes)
1. Goods, works, non-consulting services, consultants' services, Subprojects, Training, Workshops and Operating Costs under Component 1	43,540,000	100 percent
2. Goods, works, non-consulting services, consultants' services, Subprojects, Training, Workshops and Operating Costs under Component 2	35,350,000	100 percent
3. Goods, works, non-consulting services, consultant's services, Training, Workshops and Operating Costs under Component 3	20,860,000	100 percent
Front-end-Fee	250,000	
Total Amount	**100,000,000**	

28. **Counterpart funds** will be managed separately from the DA and will be properly accounted for in S2GPR, monitored, and reported by SDA in the IFRs, in both BRL and USD.

29. **Beneficiary counterpart funds:** to receive funds from SDA or FEDAF, each beneficiary will need to provide proof of their own contribution/counterpart funds at the agreed contractual percent. This contribution would need to be either the beneficiary's own proceeds or other sources of financing at his/her disposal (e.g., grants, commercial bank

financing, co-financing, etc.). Such amounts will not be considered by SDA or FEDAF when disbursements are requested from the Bank and neither be considered as Counterpart funds under the loan proceeds.

External Auditing.

30. For project purposes the project's annual financial statements will be audited by the TCE (Tribunal de Contas do Estado do Ceará) and the CGE, for the activities/contracts implemented by the TCE, according to TOR acceptable to the World Bank (prepared by the UGP and approved by the Bank, not later than one month after effectiveness) and in accordance with International Standards on Auditing (ISAs) (issued by The International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC) or national auditing standards if, as determined by the Bank, these do not significantly depart from international standards).

31. The audited financial statements will be prepared in accordance with accounting standards acceptable to the Bank (i.e. IPSAS or national accounting standards where, as determined by the Bank, they do not significantly depart from international standards).

32. The TCE and CGE are technically capable and independent to audit the project based on previous Bank's assessments and high-level quality audit reports prepared for other Bank financed operations over the last eight years and delivered in a timely manner based. The TCE is the current financial statement auditor for all state level projects being financed by the World Bank and other international organizations.

33. The auditors will also have to prepare a Management Letter, where any internal control weaknesses will be identified, which will contribute to the strengthening of the control environment. All supporting records will be maintained at the project executors and UGP for at least (a) two years after the Closing Date; or (b) one year after the World Bank has received the Audited Financial Statements covering the period during which the last withdrawal from the Loan Account was made, whichever is later.

34. The audit reports (and any accompanying Management Letters) should be submitted to the Bank six months after the end of the fiscal year. The Bank will review the audit reports and will periodically determine whether the audit recommendations are satisfactorily implemented. The Bank also requires that the Borrower/Recipient disclose the audited financial statements in a manner acceptable to the Bank and following the Bank's formal receipt of these statements from the Borrower/Recipient, the Bank will also make them available to the public in accordance with The World Bank Policy on Access to Information.

35. The Loan includes institutional capacity activities in the amount of USD 400,000 to: (i) support the upgrade of the current TCE-CE current information system (Ágora) that monitors the Government entities and municipalities' use of funds; and (ii) provide training for the TCE's staff, including technical engineers responsible to monitor subproject implementation. The TORs for these activities need to be prepared not later than one month after effectiveness. The CGE-CE will be responsible for auditing the activities/contracts implemented by the TCE-CE and the TOR for the CGE-CE's external audit role, must also be submitted and be approved not later than one month after effectiveness. The audit report from the CGE-CE will also be due six months after the end of the fiscal year.

Plan for Financial Management Supervision during implementation.

36. FM supervision will take place based on a risk profile and include: (a) reviewing of semiannual IFRs; (b) reviewing of the auditors' reports and follow-up of any issues raised by auditors in the Management Letter, as appropriate; (c) participating in project supervision; and (d) updating the FM rating in the Implementation Status and Results Report.

Procurement Arrangements.

Executive Summary extracted from the Project Procurement Strategy for Development (PPSD)

37. ***General***: Procurement will be carried out in accordance with the "World Bank Procurement Regulations for Borrowers under Investment Project Financing (IPF)" dated July 1, 2016, revised on November 2017. As per the requirements of the World Bank's New Procurement Framework (NPF), the first draft of a comprehensive Project Procurement Strategy for Development (PPSD) was carried out and identified the appropriate selection methods, market approach and type of review by the WB for the high risk and value contracts that will be executed during the implementation of the project. The objective is to improve procurement efficiency. Most activities under the proposed Project will be carried out through National or International Market Approach. An acceptable Procurement Plan was also prepared and submitted through STEP system.

38. ***Project Procurement Development Objectives (PPDO)*:** To increase procurement efficiency and ensuring value for money that contributes towards enhancing access to markets, to adopt climate resilient approaches and to improve access to water and sanitation services by targeted beneficiaries in rural areas.

39. ***Project Procurement Result Indicators:*** The following indicators will measure the achievement of the PPDO; i) Bidding processes initiated as per Procurement Plan with no substantial delays and no rebidding, ii) No substantial cost and time overrun of the contracts, and iii) Successful implementation of mechanisms and procedures to better manage project contracts.

40. ***Procurement institutional Arrangements:*** Under this operation the Procurement and contract management functions will be implemented predominantly through the Secretariat of Agrarian Development (SDA), which will also be responsible for providing support and oversighting all other co-executing agencies as needed. In addition, the implementation of the Project will also include two (2) co-executing agencies: Ceará State Audit Court (TCE / CE), *Instituto Agropolos do Ceará (Instituto Agropolos*). Project implementation team have been well established in SDA. It is also envisaged that the coordination of SDA will take the lead on the institutional strengthening and capacity building. The project's implementation arrangements in terms of procurement aspects should be clearly reflected in the project's operational manual.

41. ***SDA and Co-executing agencies Capabilities and PIUs (Project Implementing Unit) Assessment:*** The procurement risk assessment highlighted SDA's staff has lengthy experience in working with Bank-financed procurement, although this experience keeps limited to Community Participation in Procurement procedures. It is expected that the introduction of private-sector procurement procedures (commercial practices) to be applied in subprojects addressed to producer and community organizations under components 1 and 2, may challenge the SDA's procurement capacity. To mitigate possible hindrances that may affect subprojects implementation SDA should ensure additional procurement expertise for centralized procurement, and technical experts to make sure the projects have sound business plans that propose specific commercial practices and include criteria to verify economy, efficiency and transparency. Annual audits of business plan implementation performance and annual procurement audits could help identify adequacy and weaknesses. The initial implementation phases may require closer and much more intense supervision by the Bank.

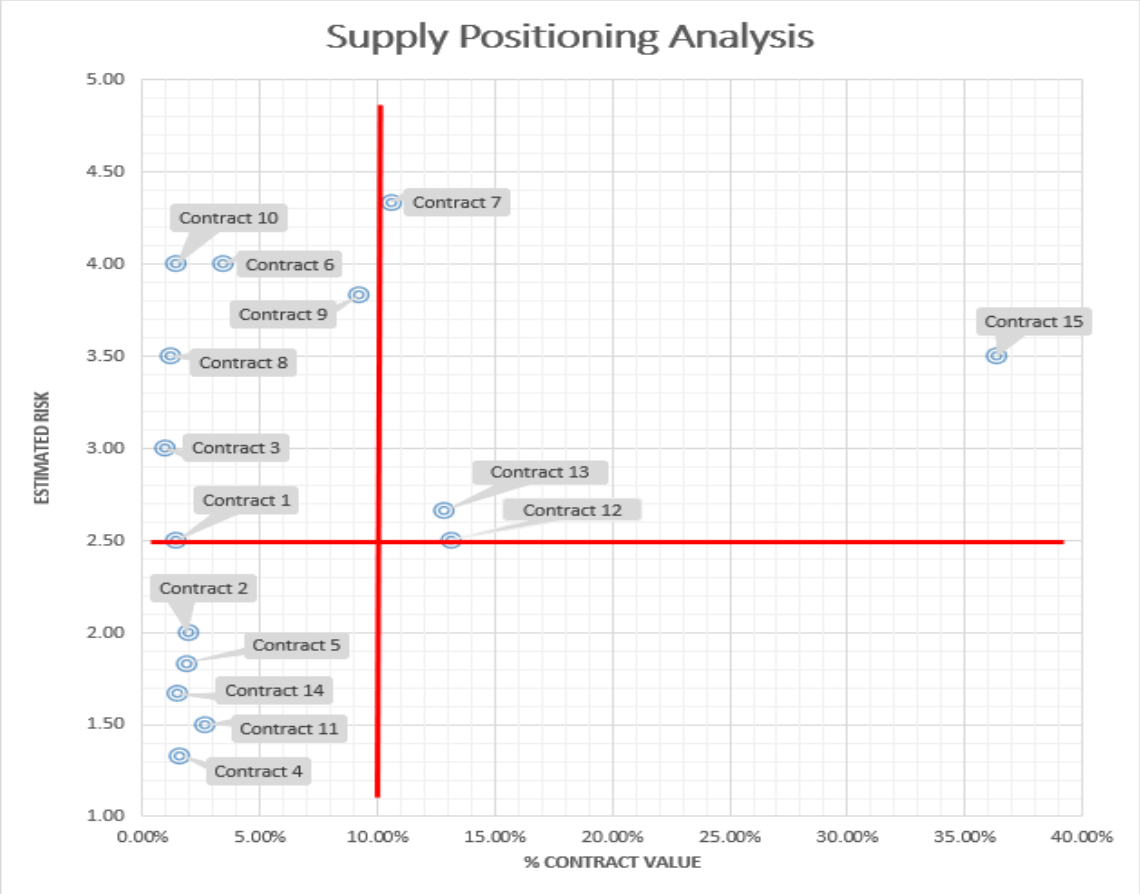
42. Moreover, it was verified that staff team of the Instituto Agropolos has no experience in handling procurement transactions and contracts financed by the World Bank. The New Procurement Framework is also new and procurement staffs involved in the Project will be trained on the different features of NPF and STEP. Indeed, it is advised to hire short term Consultant experts to reinforce both agencies for better efficiency and improve their capability in the management of large and complex contracts, when required. Field staff passing and managing the contracts need comprehensive training in the new regulations, STEP and contract management, too. The Bank will provide also implementation support for ensuring that procurement packages have been efficiently delivered in the attainment of the PPDO.

43. ***Procurement under Subprojects:*** Under Components 1 and 2, the project would finance goods, works, non-consulting services and consulting services, following Commercial Practices or designed arrangements to be carry out by Community Participation under CDD approach. Commercial Practices and procurement arrangements for Community Participation should be outlined in the Legal Agreement and further elaborated in the relevant project implementation document (manual) approved by the Bank and made publicly available by the Borrower.

44. ***Procurement risks analysis and mitigation:*** Overall, the financial management and procurement environment in Ceará State remains in continuous improvement. Levels of mismanagement, fraud, and lack of transparency merit permanent monitoring in terms of fiduciary aspects in order to curb negative effects for the project implementation. The main procurement risks are particularly inherent to the following: (i) weak capacity of the implementing agencies, in procuring and managing contracts under Bank's procurement regulations; (ii) delays in implementation due to the overall context conditions in Ceará State; (iii) delay in implementation from Bidder's side and time/cost over-runs (iv) delay in implementation of subprojects. Based on the overall assessment of the implementing and co-implementing agencies and the information available on the procurement environment in Ceará, the overall procurement risk is judged to be **Substantial**.

45. In this context, mitigation measures for governance issues have been built in the project design in the form of strict fiduciary control mechanisms and application of Bank fiduciary rules, as well as through targeted participatory and consultative mechanisms for project activities and a focus on social accountability. The project will: (i) acquire the necessary procurement expertise (individual consultants experienced on procurement under Bank-financed projects) to support implementing agencies, mainly Instituto Agropolos, ensuring a smooth project implementation; (ii) prepare an internal training program on procurement aspects to be implemented over the life of the project; (iii) Implement record security measures and backup program for project procurement documentation/information as early as possible; (iv) include an annual procurement audit by an external auditor with appropriate coverage of procurement aspects to meet project requirements in the audit ToR; (v) Include auditing of filing practices in ToR for audits; (VI) increase due diligence of winning bidders prior to awarding; (VII) Prepare procurement and contract management manual and make it available/know to all project staff and stakeholders. Furthermore, it should be noted, that the PMU should include fiduciary staff that have experience with Bank-financed operation.

46. ***Market Analysis:*** A market analysis has been carried out for different packages of procurement and based on the findings, decisions on procurement approach for goods, works and non-consulting services are finalized to ensure adequate participation of bidders. Based on PPSD information, it can be concluded that the national environment is generally favorable for the acquisition of goods, works and services needed for the implementation of the project. Consulting services' contracts have been planned to be framed based on market research and packaging of the same in terms of scope of services and period should be decided on basis of the market experience. The supply positioning aimed at determining the high and value contracts as follow:



47. ***Key procurement under the project*:** The total value of the project is US$100 million, out of which critical Contracts totalizing the value of US$75.88 million representing approximately 76% of the total financing. These contracts comprise procurement of work (US$39.80 million), goods and non-consulting services (US$16.48 million) and consulting Services (US$48.05 million).

48. ***Summary of the Procurement Plan***: As per PPSD, the following table summarizes the key contracts for the proposed project.

#	Description	Budget (Million US$)	Procurement/Selection Method	Preferential Market Approach
1	**Works**	**39.80**		
1.1	Construction of the Project´s Headquarter	1.10	Request for Bids (RFB)	Open National Approach
1.2	Construction of sanitary modules	10.00	Request for Bids (RFB)	Open National Approach
1.3	Refurbishment of EMATERCE offices	1.10	Request for Bids (RFB)	Open National Approach

1.4	Construction of water supply systems geographically scattered	27.60	Request for Bids (RFB)	Open National Approach
2	**Goods and non-consulting services**	**16.48**		
2.1	Drilling services of 150 water wells	1.45	Request for Bids (RFB)	Open National Approach
2.2	Services of recuperation and preservation of caatinga areas.	0.70	Request for Bids (RFB)	Open National Approach
2.3	Logistics and catering services for trainings on social and environmental safeguards	2.00	Request for Bids (RFB	Open National Approach
2.4	Acquisition of 72 vehicles	1.17	Request for Bids (RFB	Open National Approach
2.5	Acquisition of IT equipment and furniture for Project PIU	1.40	Request for Bids (RFB	Open National Approach
2.6	Acquisition of equipment and furniture for subprojects	9.76	Request for Bids (RFB	Open International Approach
3	**Consulting Services**	**19.60**		
3.1	Preparation of 250 viability studies and 165 design projects of water supply system	2.60	QCBS	Open International Approach with participation of national qualified consulting firms.
3.2	Preparation of 600 diagnostics and 350 business plans	8.00	QCBS	Open International Approach with participation of national qualified consulting firms
3.3	Preparation of 600 diagnostics and 350 business plans on community development.	0.90	QCBS	Open International Approach with participation of national qualified consulting firms
3.4	Technical advisory to implementation of business plans	7.00	QCBS	Open International Approach with participation of national qualified consulting firms
3.5	Technical advisory to implementation of business plans of community development	1.10	QCBS	Open International Approach with participation of national qualified consulting firms
Total		**75.88**		

49. ***Procurement and Prior Review Thresholds*:** The Procurement Plan shall set forth contracts, which shall be subject to the World Bank's Prior Review for high risk environment. All other contracts shall be subject to Post Review by the World Bank.

Procurement and Prior Review Thresholds

Category	Procurement Threshold (USD thousand)	Procurement/Selection Methods	Prior Review Thresholds
1. **Works**	>5,000	Request for Bids (RFB) Request for Proposals (RFP)	All contracts
	from 200 to 5,000	Request for Bids (RFB) Request for Proposals (RFP)	None
	≤200	Request for Quotations	None
2. **Goods and Non-Consulting Services**	>5,000	Request for Bids (RFB) Request for Proposals (RFP)	All contracts
	from 100 to 5,000	Request for Bids (RFB) Request for Proposals (RFP)	All contracts with estimated cost equal or plus than USD 1,500,000
	≤100	Request for Quotations	None
3. Consulting Services 3.A Consulting Firms	> 300	QCBS, QBS, FBS, LCS	All contracts above USD 500,000
	≤300	CQS	None
	Any involved amount	Direct Selection	All contracts above USD 500,000
3.B Individual Consultants	Any involved amount	3 CV Comparison and procedures in accordance with Section VII, Items 7.34 to 7.39 of Bank's Procurement Regulations for Borrowers	All contracts above USD >200,000 and some key project's posts