Brazil·s economy continued to recover after negative GDP growth in 2014-2019 and the drastic impact of COVID-19. After having achieved the rates of 4.8 percent in 2021 and 3.0 percent in 2022, propelled by robust private consumption, strong labor market, fiscal stimulus, social transfers, and by a favorable external environment benefiting exports, especially from agriculture, GDP growth slowed to 2.9 percent in 2023. With economic activity slowing since 2023 and 2023·s unusually high agricultural output not being matched in 2024, GDP growth is expected to further moderate to 1.7 percent in 2024. Medium-term growth projections remain at around 2 percent per year based on the expected levels of total factor productivity growth.

The poverty rate fell to 21.3 percent in 2023 (US$ 6.85 per day), due to improvements in economic conditions and social protection policies. The Bolsa Familia Program helped reduce poverty: its coverage expanded by two million families, reaching 21.3 million, with the average monthly transfer increasing from R$394.48 to R$670.36. Finally, the real minimum wage increased by 2.8 percent, boosting the incomes of about 24.5 percent of the households in the bottom 40 percent with at least one formal worker.

Its economy grew at a rate of 2.2 percent/year in real term between 2002 and 2020, slightly above the national average at 2 percent Over the past 20 years, its GDP per capita grew modestly at 1.1 percent p.a.

This is attributed to rural-urban migration as cities offer better services, including water supply and sanitation (WSS), and better economic opportunities than rural areas.

The combination of higher temperatures and lower precipitations is expected to progressively increase water scarcity 0, which, according to the Brazil·s Country Climate and Development Report (CCDR), could turn the semiarid Northeast into an arid region, and would reduce water availability for all uses, impacting commercial activities, subsistence farming and population health, fueling further migration to cities and other regions.

The Law mandates a bold reform of the regulatory framework, promotes private sector·s participation in service delivery, and introduces credit enhancement mechanisms.

13 Rural areas home to 30 million people nationwide are also lagging behind with 76 percent access to water and 40 percent to sanitation (as opposed to 94 and 75 percent, respectively, in urban areas).

21 As a comparison, investment needs for reaching universal access in urban areas are estimated at around US$4 billion.

This situation may lead to increased conflicts over water use and migration as well as further investment needs to reach universal access, as alternative, more costly water supplies must be tapped.

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[2] 5 The water transfer from the São Francisco River to four Northeastern States, known as Projeto de Integração do Rio São Francisco · PISF is a Federal Government project, which aims to secure water sources for WS and to promote the development of the driest areas of the states of Pernambuco, Ceará, Paraíba and Rio Grande do Norte. The project transfers water from the São Francisco River through two main axes, with a total of 477km of canals, 04 tunnels, 14 aqueducts, 9 Pumping Stations and 27 reservoirs: North Axis has 260 km of extension, and East Axis 217 km of extension.

Beyond hydraulic infrastructure, securing water quantity and quality for rural water requires improving the management of water resources, including better knowledge of the sedimentary aquifers capacity, better water monitoring of the rural water sources, better control of water uses in those sources notably through water rights administration and negotiated allocation, developing and implementing drought preparedness and contingency plans for rural water, activities that will be supported by the Project to secure the water sources of its RWSS systems.

To address the challenge of setting-up sustainable management models, the State Government, with support from two IBRD-financed and completed projects (Pernambuco Sustainable Water·PSH (P108654) and the Pernambuco Rural Economic Inclusion Project·PRS or Prorural (P120139)), created a RWS information system with incentives for rural communities to self-register (7,000 communities have registered) and developed a strategy that defines the institutional framework to reach rural universal access[26]

Those fees are not to finance the O&M of potable water supply infrastructure which is to be financed by a water tariff.

The State strategy to structure the RWS sector, which is under implementation since 2021, is designed to address the sustainability issue of RWS systems as well as substantially increas investments in the sector to reach universal water access in rural areas

The State Government decided to start with the implementation of the semi-professional schemes, ranging from 80 to 1,500 families, centered around the Integrated Scheme for Rural Water Supply and Sanitation (Sistema Integrado de Saneamento Rural)[30] model, successfully implemented in other Brazilian states[31]

They read meters, deliver water bills and collect tariffs.

It directly supports the CPF·s High Level Outcome 2 (·Greater Inclusion of the Poor and Underserved Populations·) and related objective 2.1 ·Improve access to essential services and products·; High Level Outcome 3 (·A Greener Economy with Reduced Vulnerability to Climate Shocks·) and related objective 3.1 ·Improve management of natural resources· as well as cross-cutting theme of Governance and institutions.

Maximizing Finance for Development. During the development of the WSS plans and the Universal WSS strategy alternatives for leveraging private participation will be considered, especially for RWSS and peri-urban areas, mostly lagging behind. In addition, once fully operational, the SISARs should be able to leverage donors and private financing for RWSS investments as happened in the State of Ceará

The Project Development objectives (PDOs) are to increase access to sustainable, safely managed drinking water supply and improved sanitation[6] in selected rural communities and to build the Borrower·s capacity to reach universal RWSS services

PDO Level Indicators

- Rural people benefiting from access to safely-managed drinking water supply from climate-resilient water source (number), disaggregated by gender and race/ethnicity (percentage)
- Rural people provided with at least basic sanitation services (Number), disaggregated by gender and race/ethnicity (percentage)

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[6] Safely managed drinking water · as per the Joint Monitoring Program for Water Supply and Sanitation·s (JMP) standards · is drinking water from an improved water source that is accessible on premises, available when needed and free from contamination, whereas Basic drinking water is drinking water from an improved source that is , provided collection time, including queuing is no more than 30 minutes.

The Project is a steppingstone towards addressing one of the most critical water security challenges facing the Northeast region of Brazil under a changing climate and of high relevance to its States Governors agenda; that is providing sustainable, universal access to potable water supply and sanitation services in rural areas.

The proposed Project is a US$113 million Investment Project Financing (IPF) operation, financed by a US$90 millio IBRD loan and US$23 million in State counterpart funds[30] 9

Subcomponent 1.1 ·Increase access to safely-managed RWS and improved on-site sanitation solutions with climate-resilient designs (US$69.50 million of which US$66.50 million IBRD financing and US$3 million counterpart funds).

No rehabilitation. 5 of existing dams nor construction of new dams will be eligible for financing.

Subcomponent 1.3 · Innovate with climate-resilient, safely-managed RWSS pilot solutions for universal access (US$0.97 million, fully IBRD financed). The subcomponent will implement innovative technical and management pilot solutions to prepare for climate-resilient, universal access in those rural water supply market segments not covered by SISARs (especially small villages and scattered housing) and to transition fully to safely managed sanitation designed to be resilient to increased scarcity, floods and droughts (design elements detailed in the Technical Analysis section). Financed activities include development of studies and designs for water scarcity, flood and drought resilience, implementation of pilots, monitoring of results, evaluation for replicability and scalability, incorporation in RWSS strategy and investment plans and dissemination of results, including in RWSS strategy and investment plans developed under 2.1.

This component aims at building the capacity of the public and private, not-for-profit entities (State, SISAR, community·s associations) that have a key role in delivering sustainable, safely managed, and flood and drought-resilient RWS and improved sanitation solutions to reach universal and climate-resilient access.

This includes, inter alia: (i) the construction or renovation and equipment of APAC·s headquarters and two regional offices to increase its presence in the field and its working environment taking into account climate dimensions; (ii) the promotion of a public awareness campaign to increase water users· registration and water rights emission; (iii) the development of hydrogeological studies of sedimentary aquifers to identify drought resilient sources; (iv) the strengthening of hydromet monitoring[4] 8 to better manage rural water sources, improve drought and flood forecasting and climate projections; (v) the development of a state-wide drought preparedness plan, (vi) the carrying out of feasibility studies for urban riverfront park to improve riverfront public access and recreational use as well as improve river and banks ecological state; and (vii) the design and implementation of hydraulic infrastructure and sanitation planning platform.

The Project will also build the State institutional capacity (SESAN COMPESA APAC) to deliver sustainable, universal RWSS access, ultimately benefiting Pernambuco·s entire rural population, estimated at 1.6 million people. Moreover, the strengthening of APAC·s capacity to implement its WRM, dam safety and PISF functions should indirectly benefit, both rural and urban populations (about 10 million people), as well as most of the economic activities on which they rely for their livelihood.

Drawing on long and successful engagement in Pernambuco·s water sector and the Northeast overall and its extensive global experience in RWSS and WRM, the Bank can play a unique role in supporting the State of Pernambuco in reaching its universal WSS access goal in rural areas through lending and technical assistance, particularly in advising the State on ways to enhance the sustainability of RWSS investments, in particular through the strengthening of SISARs, participatory approaches, community participation, climate change mitigation and adaptation, and provide technical, managerial, operational, and supervisory expertise, enhancing investment sustainability and delivering added value to local communities.

More specifically, UNICEF is supporting municipal governments to increase water access (mostly) and sanitation and to promote hygiene and menstrual health in schools. The Avina Foundation fosters public-private partnerships for RWSS interventions and is planning to fund a few RWS systems where SISARs are already operati

However, this is fundamental information to design RWSS strategies, policies and public investment programs to reach universal access, as well as to monitor and evaluate progress and impacts of those programs and improve them along the way.

For this reason, the Project commits to at least reaching basic sanitation while striving to provide safely managed solutions where possible by promoting knowledge exchanges; piloting solutions successfully implemented and scaled-up elsewhere; including suitable arrangements for their O&M and financing, in order to find solutions that could be replicated and considered in the WSS plan and universal RWSS strategy.

Moreover, itis considering the Project as a stepping-stone to prepare a large RWSS program for universal access, possibly through a vertical MPA, and is currently mobilizing financing from other sources that will follow the Project·s approach.

Investment needs exceed Project·s financial capacity, so a set of eligibility and prioritization criteria were developed.

Studies are being carried out for the first two SISARs that are operational to define the tariff structure, investment needs, number of connections and minimum SISAF capacity in order to reach O&M sustainability (or maturity) while providing quality service provision, and thereby better calibrate the level of efforts needed from the State to support the SISAR schemes.

The bidding process of a first batch of sanitation works will occur early into implementation in communities that have recently received RWS systems financed with counterpart funds.

Component 1 finances the construction, rehabilitation and expansion of RWSS systems, including drinking water treatment, and on-site sanitation facilities (toilets and septic tanks).

The Project will not finance any large-scale anaerobic treatment plants with high unabated methane emissions or sanitation systems that significantly rely on the use of on-site fossil fuels.

Component 2 finances non-physical investments aimed at strengthening the capacity for the sustainable management of rural WSS systems and their water sources, including education and capacity building, emergency preparedness and hydro-meteorological observation networks which are in the Universally Aligned List. It also finances the rehabilitation of APAC·s regional offices and headquarters which will include energy efficient design.

Its main results are a Project Net Present Value (NPV) of US$165 million and an Economic Internal Rate of Return (EIRR) of 25.8 percent (excluding GHG emissions), much above the opportunity cost of capital estimated at 6 percent.

If overall benefits are reduced by 30 percent, the EIRR is still 19 percent and the NPV US$109 million; likewise, with a cost overrun rate of 30 percent, the Project remains viable with an EIRR of 18 percent and a NPV of US$137 million.

Given that these SISARs will be set up in rural low-income areas, it is worth noting that the financial objective is to cover Operations and Management (O&M) costs, not to recover capital investments. The goal is to make the SISARs sustainable, by been able to cover their O&M costs, while keeping WSS services affordable for households living below the poverty line.

The FM assessment concluded that SHRS has sufficient capacity to fulfill its FM responsibilities for the Project as the FM systems are adequate to provide reasonable assurance that the Projects funds will be used for the intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability, and with the implementation of the proposed mitigating measures and agreed actions to strengthen the FM systems.

The Project is expected to generate a positive E&S impact in improving the quality of life of the benefited families, giving them access to drinking water, improved sanitation, hygiene and environmental education.

Soft activities, i.e., preparation of feasibility/analytical studies, engineering designs, training and capacity building, refurbishment, acquisition of goods, and development of a hydraulic and sanitation planning platform are considered of Low Risk.

The Project will not finance the construction of new dams, nor the rehabilitation of existing dams, but it will rely on the performance of existing dams which will be the water sources for some RWS systems financed by the Project.

Project design features to reduce this risk include: a longer implementation period, to allow time for SISARs to mature and the State agencies to build sufficient capacity, and the

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These reforms may slow-down Project implementation and, in the case of Compesa·s increased private participation, may reduce its support to the SISARs, to which it is, along with SESAN, providing technical expertise and subsidies during their incubation phase.

The Project will not finance the construction of new dams, nor the rehabilitation of existing dams, but it will rely on the performance of existing dams which will be the water sources for some RWS systems financed by the Project.

RESULTS FRAMEWORK AND MONITORIN

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PDO Indicators by PDO Outcomes

Baseline	Closing Period
Increase access to sustainable, safely managed, climate-resilient drinking water supply	
Rural people benefiting from access to safely-managed drinking water supply from climate-resilient water source (number), disaggregated by gender and race/ethnicity (Number)	
Nov/2023	Jun/2032
0	48,000
· Rural people benefiting from access to safely-managed drinking water supply from climate-resilient water source by gender and race/ethnicity (Text)	
Nov/2023	Jul/2032
Not applicable.	Percentage of Project beneficiaries per gender and race/ethnicity
SISAR Service Quality Index (Text)	
Nov/2023	Jun/2032
Not applicable	Good
Increase access to improved sanitation	
· People provided with at least basic sanitation services , disaggregated by gender and race/ethnicity.	

APAC, which is a special agency of the State, will participate in the implementation of Component 2.2, except for the development of the Hydraulic Infrastructure and Sanitation Planning Platform.

In addition, SEIH, while not a technical cooperating entity, will provide support to the PMU in the preparation of the terms of reference/technical specifications and in the supervision of contracts to set-up the hydraulic infrastructure and sanitation planning platform.

In 2021, 84 percent of Brazilians had access to adequate water supply, with the Northeast region lagging behind with 75 percent access to water and 30 percent to sanitation.

The lack of home bathrooms and WASH services is still a reality in Pernambuco, so the Project envisages the implementation of bathrooms with adequate sanitary solutions, and treatment.