

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PERU

**COMPREHENSIVE RURAL WATER AND SANITATION PROGRAM, PHASE II
(PIASAR II)**

(PE-L1269)

LOAN PROPOSAL

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ABBREVIATIONS

AAS	Análisis Ambiental y Social [environmental and social analysis]
AOM	Administration, operation, and maintenance
CRG	Office of the Comptroller General
DATASS	Sistema de Diagnóstico sobre Abastecimiento de Agua y Saneamiento en el Ámbito Rural [Rural Water and Sanitation Supply Diagnostic System]
DRVCS	Regional housing, construction, and sanitation departments
ESMS	Environmental and social management system
ESPF	Environmental and social policy framework
INEI	Instituto Nacional de Estadística e Informática [National Institute of Statistics and Information Technology]
IRER	Internal rate of economic return
JASS	Juntas Administradoras de los Servicios de Saneamiento [Sanitation Services Administration Boards]
MGAS	Marco de Gestión Ambiental y Social [environmental and social management framework]
MTAs	Áreas Técnicas Municipales [Municipal technical areas]
MVCS	Ministry of Housing, Construction, and Sanitation
NCB	National competitive bidding
PIASAR PMU	PIASAR Program Management Unit
PMU	Program Management Unit
PNS	Plan Nacional de Saneamiento [National Sanitation Program]
PNSR	Programa Nacional de Saneamiento Rural [National Rural Sanitation Program]
PGAS	Planes de Gestión Ambientales y Sociales [environmental and social management plans]
SDGs	Sustainable Development Goals of the United Nations
SIAF	Sistema Integrado de Administración Financiera [integrated financial management system]
SOFR	Secured Overnight Financing Rate
WHO	World Health Organization
W&S	Water and sanitation

PROGRAM SUMMARY
PERU
COMPREHENSIVE RURAL WATER AND SANITATION PROGRAM, PHASE II (PIASAR II)
(PE-L1269)

Financial Terms and Conditions				
Borrower: Republic of Peru			Flexible Financing Facility^(a)	
Executing agency: Ministry of Housing, Construction, and Sanitation (MVCS), through the National Rural Sanitation Program (PNRS).			Amortization period:	15 years
			Disbursement period:	6 years
Type of loan: Global multiple works			Grace period:	7 years ^(b)
Source	Amount (US\$)	%	Interest rate:	SOFR-based
IDB (Ordinary Capital):	150,000,000	65	Credit fee:	(c)
			Inspection and supervision fee:	(c)
Local:	82,279,758	35	Weighted average life:	11 years
Total:	232,279,758	100	Currency of approval:	U.S. dollar
Program at a Glance				
Objective/description: The specific objectives of this operation are to: (i) expand access and improve the quality of water and sanitation (W&S) services in rural communities; (ii) promote sustainable management (operational and financial) of the services; and (iii) create new capacity for women and increase their participation in service delivery and leadership positions on the Sanitation Services Administration Boards (JASS). Attaining these objectives will contribute to the general objective of improving sanitary and environmental conditions in priority rural areas of the country by reducing the gap in coverage of W&S services.				
Special contractual conditions precedent to the first disbursement of the loan proceeds: (i) The executing agency will have submitted evidence that the program Operating Manual has entered into effect under the terms and conditions previously agreed upon with the Bank, and that it includes the environmental and social requirements and annexes incorporating the environmental and social management system, the environmental and social management framework, and the environmental and social action plan; and (ii) the executing agency will have submitted evidence that it has assigned or begun the process of engaging the following personnel for the program management unit (PMU), in accordance with the profiles and requirements previously agreed upon with the Bank: a general coordinator, a technical coordinator, a planning and budget specialist, a social and community relations specialist, an environmental specialist, a financial-accounting specialist, a deputy project manager, and a procurement specialist (paragraph 3.5).				
Special contractual conditions for execution: Prior to the start of the W&S works in Subcomponent 1.1, the borrower, through the executing agency, will submit evidence that: (i) rights-of-way and/or authorization have been obtained for use of the land needed for the respective program works and that those rights-of-way and/or authorizations have been obtained pursuant to applicable national and local legislation; and (ii) an interagency cooperation agreement has been signed between the municipalities and the MVCS for administration, operation, and maintenance (AOM) of the program's drinking water systems, in accordance with terms and conditions previously agreed upon with the Bank (paragraph 3.6). See Annex B of the environmental and social review summary for other special contractual conditions (link 2).				
Exceptions to Bank policies: None.				
Strategic Alignment				
Challenges:^(d)	SI <input checked="" type="checkbox"/>		PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>
Crosscutting themes:^(e)	GE <input checked="" type="checkbox"/> and DI <input checked="" type="checkbox"/>		CC <input checked="" type="checkbox"/> and ES <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>
Sustainable Development Goals (SDGs):^(f)	SDG 1 <input checked="" type="checkbox"/>	SDG 2 <input type="checkbox"/>	SDG 3 <input checked="" type="checkbox"/>	SDG 4 <input type="checkbox"/>
	SDG 5 <input type="checkbox"/>	SDG 6 <input checked="" type="checkbox"/>	SDG 7 <input type="checkbox"/>	SDG 8 <input type="checkbox"/>
	SDG 9 <input checked="" type="checkbox"/>	SDG 10 <input checked="" type="checkbox"/>	SDG 11 <input checked="" type="checkbox"/>	SDG 12 <input type="checkbox"/>
	SDG 13 <input checked="" type="checkbox"/>	SDG 14 <input type="checkbox"/>	SDG 15 <input type="checkbox"/>	SDG 16 <input type="checkbox"/>
	SDG 17 <input type="checkbox"/>			

^(a) Under the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency, interest rate, and commodity conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

^(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

^(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with applicable policies.

^(d) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

^(e) GE (Gender Equality) and DI (Diversity); CC (Climate Change) and ES (Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

^(f) SDG (Sustainable Development Goal). For more information on the SDGs, open [this link](#) and to consult the IDB Group's SDG Project Classification Methodology open [this link](#).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rational

- 1.1 **Background.** Peru had an estimated population of 33.05 million in 2021, 82% of which was living in urban settings and 18% in rural areas.¹ Administratively, the country is divided into 25 regions located in three main geographic areas, i.e. the coast, the Andean highlands, and the jungle. The country's rural zone contains 73,318 municipios, 86% of which have populations of no more than 200 and 14% have populations of between 201 and 2,000. In terms of water and sanitation (W&S) services coverage in the rural zone, 77.6% of the population has access to access to the public water system and 30.2% to sewerage or excreta disposal services.²
- 1.2 **Institutional framework.** The Ministry of Housing, Construction, and Sanitation (MVCS), acting through the Vice Ministry of Construction and Sanitation, is the sector's lead agency. It is responsible for preparing mechanisms of coordination, articulation, and cooperation with regional governments, municipalities, and civil society. The MVCS' National Rural Sanitation Program (PNRS) has the mandate of improving quality, expanding coverage, and promoting sustainable use of W&S services for rural populations. The regulation and supervision of W&S services is the responsibility of the National Superintendency of Sanitation Services (SUNASS), which ensures the provision of W&S services in urban and rural areas. The district municipalities are responsible for delivering W&S services either directly or through the Sanitation Services Administration Boards (JASS). The Municipal Technical Areas (MTAs) are municipal line agencies responsible for monitoring, supervising, and providing technical assistance to the JASS, with a view to making W&S services sustainable. The Regional Housing Construction and Sanitation Departments (DRVCS) of the regional governments supervise and provide technical assistance to the MTAs.
- 1.3 **Problem addressed.** The gaps in access to W&S service coverage between urban and rural areas are one of the sector's main problems. According to the National Sanitation Plan 2022–2026, the percentage of people with access to water delivered by a public system rose from 89% in 2017 to 91% in 2020. The gap in access to water between urban and rural areas is more than 17 percentage points. A full 95% of urban areas have access to water through a public system while the figure for rural areas is 78%. However, these data do not reflect water service quality. In rural areas, just 2.7% have water with adequate levels of residual chlorine and 59% have continuous access.
- 1.4 With regard to sanitation, the gaps in service access are even wider. Nationwide, 77% of the population has access to sewerage or excreta disposal services. Urban coverage is 89%, while rural coverage is 30%. Furthermore, in rural areas close to 50% of schools have no water service and nearly 70% have no sanitary infrastructure (toilets).³ Lack of access to W&S services affects quality of life, education, health, social and gender inclusion, productivity, environmental sustainability, and economic growth (Howard et al., 2020). In 2016, the prevalence

¹ [National Institute of Statistics and Information Technology \(INEI\).](#)

² [National Sanitation Plan 2022-2026.](#)

³ [Ibid.](#)

of acute diarrhea in Peru among children under 5 was 11.4% in urban areas and 11.8% in rural ones.⁴ Chronic malnutrition affected a larger percentage of children under 5 in rural areas (26.5%), which is 18.6% more than in urban areas (7.9%).⁵

- 1.5 **Gender and disability gaps.** According to the World Health Organization (WHO), women in rural areas bear the brunt of responsibility for collecting and hauling water for the household. The WHO estimates that the total time spent on hauling water for household use amounts to 64% for women, compared to 24% for men, and 12% for children. In other words, when a household has no access to a water system, women spend a very significant amount of their time collecting and hauling it in containers that can weigh up to 20 kilograms and walking for up to three hours per day to the closest water source. In Peru, it was found that having to haul water prevents women from investing time in other activities on account of the burden of household work. In addition, the country has a total of 3.2 million people with disabilities, or 10.3% of the population. In all, 15.3% of persons with disabilities (493,369 people) live in rural areas—243,509 men (49.3%) and 249,860 women (50.6%) (National Institute of Statistics and Information Technology (INEI), 2017). Not having access to a water network or sanitation within the home has a disproportionate impact on this population owing to the difficulties they have hauling water or using the bathroom, particularly people with motor disabilities. Another disadvantage suffered by this group is that they earn less than the able bodied. Their average income in rural areas is about S/ 527 a month (US\$136), while the able bodied earn S/ 771 (US\$183), which demonstrates the gap faced by that group.
- 1.6 **Service delivery in rural areas.** The district municipalities are responsible for delivering W&S services, either directly or through the JASS.⁶ As rural centers are characterized by small populations, low density, and geographic dispersion,⁷ the JASS have become the predominant model for service delivery. There are more than 27,000 entities responsible for administering, operating, and maintaining rural W&S services. The JASS make up 92.4% of the total; municipalities, 2.7%, individuals or authorities, 3.2%; and other institutions that function as service providers, 1.7%. The MTAs are municipal line organizations responsible for monitoring, supervising, and providing technical assistance to the JASS with a view to ensuring the sustainability of W&S services. The DRVCS of the regional governments supervise and provide technical assistance to the MTAs. According to the Rural Water and Sanitation Supply Diagnostic System (DATASS),⁸ 69% of service providers in rural areas charge household user rates that average S/ 3.1 (US\$0.80) a month per family. Such rates do not reflect the true cost of covering the administration, operating, and maintenance (AOM) costs associated with

⁴ [INEI, 2016.](#)

⁵ Ibid.

⁶ They are communal organizations freely elected by the communities for the purpose of administering, operating, and maintaining rural W&S services in one or more population centers

⁷ This poses a heavy constraint on creating management units with economies of scale, as the vast majority of water supply systems for each locality are independent.

⁸ [DATASS - Modelo para la toma de decisiones en saneamiento](#) [Sanitation decision-making model].

providing these services. Estimates suggest that just one out of every four providers charges enough to cover their AOM costs.⁹

- 1.7 **Causes of the problems.** The gaps in access to W&S services in rural areas are mainly due to: (i) lack of investment, which has resulted in lower levels of coverage;¹⁰ and (ii) poor management by service operators, which has meant, *inter alia*, that only 2.7% of rural water systems have the required quality and only 43% of infrastructure is in good condition.¹¹ With respect to some service operators, the main challenges facing the JASS include poor water system AOM, reflecting the shortage of trained personnel,¹² the lack of the necessary tools, low residential user fees,¹³ and high levels of arrears. In the case of the PNSR, one of the main challenges it faces is the lack of digital tools to monitor project execution and service quality since it is impossible to perform inspections in situ with the necessary frequency, given that the systems are spread out geographically.
- 1.8 A third factor that contributes to the poor sustainability of the services is the meager participation of women in their delivery. In a sample of nearly 100 JASS established between 2019 and 2021, just 33.7% of their board members were women (compared to 66.3% for men), pointing to a significant participation gap (32.6 percentage points) between the two groups. This percentage distribution is low in light of Ministerial Resolution 205-2010-Vivienda, requiring the JASS to seat at least two women on their boards. Furthermore, just 7.6% of women sitting on JASS were board chairpersons, 29.3% were board secretaries, and 34.8% were treasurers, which indicates a particularly low level of participation in key decision-making posts. Apart from their scant share of leadership positions, rural women also play a smaller role in the workforce in general. According to 2020 data of the National Institute of Statistics and Information Technology (INEI), 1.5 million women held jobs, compared to nearly 2.2 million men, highlighting their lower level of labor market integration. There were also large differences in income levels, with S/ 510 (US\$132) for women and S/ 747 (US\$193) for men (almost 1.5 times higher).
- 1.9 The midterm evaluation of the National Sanitation Plan (PNS)¹⁴ indicates that although W&S service coverage levels in urban and rural areas have increased, significant gaps in water coverage and quality remain in rural localities with vulnerable populations, as well as deficiencies in the management of those services, which are principally operated by the JASS. The evaluation also identified that in rural areas there are shortcomings associated with the role of deconcentrated agencies responsible for rural project cycles (e.g. Regional Housing, Construction, and Sanitation Directorates, and MTAs) in the investment stage (inefficient execution, supervision, and monitoring partly due to the lack of capacity and human resources) and in the regulatory framework (MVCS standards

⁹ [Plan Nacional de Saneamiento 2022-2026](#) [National Sanitation Plan 2022-2026].

¹⁰ [Plan Nacional de Saneamiento 2022-2026](#).

¹¹ INEI ENAPRES 2016 and [Plan Nacional de Saneamiento 2022-2026](#).

¹² Only about 14.3% of community organizations have a person whose has completed at least one training course related to system operation (PNSR 2013-2016 medium term plan).

¹³ Average operating margin of -34.4% (MVCS 2011).

¹⁴ [Evaluación intermedia del Plan Nacional de Saneamiento](#) [Midterm evaluation of the National Sanitation Plan].

need to be made more flexible and their application facilitated), which stand in the way of attaining the targets.

- 1.10 **Program design strategy.** Despite the country's efforts in recent years, the challenges for achieving universal W&S service coverage still demand large investments,¹⁵ which is why the government proposes to target areas where the gaps are widest. In response to the challenges and their causes, the proposed program seeks to increase W&S coverage in rural areas by improving access to and the quality of those services, promoting sustainable operational and financial management of service delivery, and increasing women's participation in W&S management and leadership positions.
- 1.11 The MVCS' PNSR has a portfolio of 1,110 W&S projects for rural areas. To achieve an intervention that helps to increase coverage, benefiting the largest possible number of people, and that can be implemented rapidly, 167 projects were prioritized that could form part of this program, based on the following criteria: (i) they have technical files¹⁶ approved by a Director's Resolution or in the approval process; and (ii) their objective is to expand the service, helping to narrow gaps. The program will also include institution-building activities to enable the community to take ownership of and adequately use the systems, to enable the JASS to perform adequate AOM of the systems, and to enable the MTAs and DRVCS to provide the necessary support.
- 1.12 **Evidence of effectiveness.** In Peru's case¹⁷ as in similar contexts, a positive relationship exists between access to W&S and health and environment, as mentioned above (paragraph 1.4). According to the project completion report for [PE-X1004; GRT/WS-12127-PE](#), construction solutions of this kind in rural areas helps to increase the coverage of W&S, but the infrastructure needs to be accompanied by socialization activities that promote the adoption of solutions by the community and strengthen the water boards and other sector institutions that contribute to the sustainability of the systems. According to the Rural Water and Sanitation System Information System ([SIASAR](#)), rural systems that include at least one woman on the management committee present higher sustainability indexes.¹⁸

¹⁵ According to the MVCS' National Sanitation Plan 2022-2026, investments of US\$13 billion are required to close the gap in the sanitation sector, with estimated investment needs of US\$1.3 billion in rural areas alone for the period 2022-2026.

¹⁶ Engineering documents ready for tendering.

¹⁷ In Peru, there were differences in the prevalence of diarrhea depending on housing features in 2016, with the differences being greater in children under 5 living in dwellings with unimproved drinking water (13.1%) compared to dwellings with improved water (including the public system, household well, spring, or rainwater) (11.3%). The prevalence was also higher among children under 5 who lived in dwellings with unimproved or shared sanitary service (12%) compared to children with improved and unshared services (11.2%). The prevalence of bloody diarrhea in children under 5 living in dwellings with unimproved drinking water (0.7%) compared to improved water (0.7%); while the figure for children living in dwellings with unimproved or shared sanitary services was 1.2% compared to 0.5% for improved and unshared services ([INEI, 2016](#)).

¹⁸ IDB (2021). [Water and Sanitation Sector Framework Document](#).

- 1.13 **Knowledge of the sector.** The Bank has wide knowledge of the rural W&S sector in the region¹⁹ and in Peru. In Peru it is executing the Rural water and sanitation program (PIASAR I, [4442/OC-PE](#)) for US\$100 million in nine regions, which is 73.68% disbursed, and between 2012 and 2018, it executed the Program to improve and expand W&S services in Peru ([GRT/WS-12127-PE](#)) for US\$320 million. The main results of the two programs include: narrowing the gap in coverage and quality of water and sanitation services in rural localities, strengthening community (JASS) and municipal (MTA) organizations, and training service users. The technical-cooperation project [PE-T1476](#) (client support) has helped to evaluate the sustainability of PIASAR I and examine the efficiency of the interventions and technological solutions adopted, and provided support in preparing the portfolio of projects to be included in the proposed program.
- 1.14 **Lessons learned.** The lessons learned from Bank rural W&S interventions that were taken into account in designing the proposed operation include: (i) a demand-based approach should be taken; (ii) it is important to have studies and designs ready for tendering at the start of the operation to make headway in execution; (iii) pre- and post-construction interventions are required for sustainability as well as a monitoring system that tracks performance in the operating and maintenance stage; (iv) institutional strengthening is crucial, not just on the level of training for personnel, but on the structural and organizational levels, with adequate financial resources to establish an effective institutional framework for the W&S sector; (v) adequate coordination mechanisms between the national, regional, and municipal governments and the water boards need to be designed to ensure adequate execution and sustainability of the interventions; and (vi) participation by women is well-received and has a positive impact on their position in the community and on project results. These lessons are applicable to the proposed program through the prioritization made necessary by the gap (paragraph 2.4), updating of the studies for pre- and post-construction interventions (paragraph 1.20), strengthening for all levels of government, and implementation of a gender strategy and training for women (paragraph 1.22).
- 1.15 **Country strategy in the sector.** The country has recently approved the National Sanitation Plan 2022-2026, whose objective is to provide universal, sustainable, and quality access to W&S services, incorporating criteria for equity, accessibility, climate change adaptation and mitigation, disaster risk management, and the circular economy. The plan has two main pillars: universal access and sustainable management of quality services.
- 1.16 **IDB Group's strategy with the country.** The operation is consistent with the IDB Group's strategy with Peru 2017-2021 (document GN-2889), since it contributes to the strategic objective of improving access to and the quality of W&S services through the indicators: (i) drinking water service coverage in rural areas; and (ii) basic sanitation coverage in rural areas.
- 1.17 **Compliance with the Public Utilities Policy (document GN-2716-6).** The proposed program and the national sector objectives are consistent with the principles of the Public Utilities Policy (document GN-2716-6), and they satisfy the

¹⁹ Between 2007 and 2021, the Bank executed 16 rural W&S operations for over US\$1.8 billion in 15 countries.

conditions of financial sustainability and economic evaluation, as the residential user rates included in the technical files of the program's projects (paragraph 1.32) ensure that the JASS will generate sufficient funds to meet the operating and maintenance costs of the systems associated with the operation. In addition, the works to be financed under the program are viable from the socioeconomic viewpoint (paragraph 1.31). For the projects outside the sample, the corresponding eligibility criteria are included to ensure compliance with the conditions of that policy (paragraph 2.4) ([link 10](#)).

B. Objectives, components, and cost

- 1.18 **Objectives and scope.** The specific objectives of this operation are to: (i) expand access and improve the quality of water and sanitation (W&S) services in rural communities; (ii) promote sustainable management (operational and financial) of the services; and (iii) create new capacity for women and increase their participation in service delivery and leadership positions on the Sanitation Services Administration Boards. Attaining these objectives will contribute to the general objective of improving sanitary and environmental conditions in priority rural areas of the country by narrowing the coverage gap in W&S services.
- 1.19 **Component 1. Water and sanitation projects (US\$202,236,856).** This component will help to expand the coverage of water and sanitation works in rural communities, including houses, health centers, schools, and social organizations, and create conditions of sustainability for the systems built. It comprises two subcomponents:
- 1.20 **Subcomponent 1.1. W&S Studies and works (US\$194,416,579).** This will finance: (i) updating final studies that include socialization and validation by the beneficiary population; (ii) drinking water works; (iii) sanitation works; and (iv) works supervision. The designs will include climate change considerations (solutions that are resistant to drought and sanitation systems with low carbon emissions), inclusive infrastructure (sanitary services that are universally accessible), and social and environmental management measures.
- 1.21 **Subcomponent 1.2. Social intervention and service management (US\$7,820,277).** This will finance: (i) regularization and training for the JASS in AOM, legal aspects, and female leadership; (ii) institutionalization of the MTAs and training in AOM; and (iii) implementation of sanitary and environmental education activities for beneficiary households, with a gender and diversity approach.
- 1.22 **Component 2. Service sustainability and strengthening for sector entities (US\$13,175,116).** This component will help to consolidate the operational and financial sustainability of the systems constructed and strengthen sector capacity. It will finance: (i) operating and managerial outfitting of the JASS and the MTAs or the municipal management units; (ii) design and implementation of a training and certification program for OC; (iii) strengthening the skills of the DRVCS and the CAC; (iv) assisted technical operation of the water systems and consolidation of their sustainability; (v) design and implementation of a remote monitoring system for works execution and remote supervision of service delivery for the PNSR (paragraph 1.26); (vi) design and implementation of a gender and diversity strategy, (vii) training for women in masonry and installation of W&S systems and

connections; and (viii) design and implementation of the program's communications plan.

- 1.23 **Program administration, evaluation, and audits (US\$16,867,786).** The program will also finance costs associated with personnel (at headquarters in Lima and in the 18 regions²⁰ covered by the program) and procurement of goods for the PIASAR Program Management Unit (PIASAR PMU), program monitoring and evaluation (paragraphs 3.10 and 3.11), and external audits.
- 1.24 **Main results indicators, benefits, and beneficiaries.** The main results indicators are associated with narrowing the gaps in access to W&S in rural areas and promoting the sustainability of the services. The program is expected to directly benefit about 75,000 people with secure access to W&S (see Annex II – Results Matrix).

Table 1 – Main results indicators

Indicator	Unit of measure	Baseline	Target
Households with access to safe water in the beneficiary localities	Households	0	15,000
Households with access to safe sanitation in the beneficiary localities	Households	0	15,000
JASS whose operating income covers AOM costs	JASS	0	90
Percentage of JASS with a woman as president, secretary, or treasurer	Percentage	0	25

C. Strategic alignment

- 1.25 The program is consistent with the Second Update to the Institutional Strategy (document AB-3190-2) and is aligned with the development challenge of Social Inclusion and Equality, through the expansion and improvement of access to W&S service, and with Productivity and Innovation, through the digitalization of works supervision and the service delivery monitoring system (paragraph 1.26). In addition, it is aligned with the crosscutting areas of: (i) Institutional Capacity and Rules of Law, since it helps to boost the capacity of the municipalities and the JASS to manage the service (paragraph 1.22); (ii) Gender Equality, by promoting women's participation in project execution and in the JASS, since gaps still exist in their participation as unskilled labor, and in leadership opportunities (paragraph 1.27); and Diversity, by upgrading the sanitary infrastructure of social establishments and schools, making them universally accessible; and (iii) Climate Change and Environmental Sustainability, through the improvement in the systems for water intake, storage, and distribution, protection of the quality of bodies of water, and lessening vulnerability to climate change by including climate resilience in the design of W&S infrastructure and actions to protect sources to guarantee water security (paragraph 1.29). Some 53.78% of the operation's funds will be invested in activities to adapt to climate change according to the [Joint methodology of the multilateral development banks for estimating climate finance](#).

²⁰ The 18 regions are Amazonas, Ancash, Apurímac, Ayacucho, Cajamarca, Cusco, Huancavelica, Huánuco, Junín, La Libertad, Lambayeque, Madre de Dios, Pasco, Piura, Puno, San Martín, Tumbes, and Ucayali.

These resources contribute to the IDB's climate financing target of 30% of the volume of annual approvals. Lastly, it contributes to the Corporate Results Framework 2020-2023 (document GN-2727-12), specifically to the indicators "Households with improved access to water and sanitation" and "Projects supporting social inclusion and equality."

- 1.26 **Innovative actions.** The program will develop systems to strengthen the PNSR by digitalizing works supervision and service delivery supervision, which will be performed remotely and in real time. For works supervision, software will be designed and used to digitalize field data capture and management using intelligent mobile devices and information technology able to capture data anywhere and provide access to project information, reducing data errors, allowing for traceability of physical and financial progress, and providing data in real time for each project. To supervise service delivery, a system based on telemetry will be developed that will produce reports in real time on the quality of the water service (continuity and residual chlorine, etc.) and reduce time lags between the information generated by providers and the information registered in the MVCS' information systems, thereby optimizing decision-making.
- 1.27 **Gender and diversity actions.** Based on the analysis of gender and diversity gaps performed during preparation of the operation, 11 activities have been identified for implementation under Component 2, which will form part of the program's social interventions. Five of them are intended to reduce gender gaps and six bear on diversity. To implement them, the executing agency will be strengthened with a specialist in these areas. The following activities relate to gender: (i) development of a methodological guide for mainstreaming the gender focus in rural W&S projects; (ii) preparation of a toolbox (based on the guide) for mainstreaming the gender focus into rural W&S projects; (iii) training for the staff of the executing agency in using the guide and the toolbox; (iv) organization of working groups and regional leadership workshops on women's participation in the JASS and local execution units and in the development of productive projects; and (v) training courses to promote women's participation in building works and in operating and maintaining water systems, to which end an agreement will be signed with the National Construction Industry Training Service (SENCICO). The following diversity-related activities will be carried out: (i) improvement in the DATASS application for collection of data broken down by diversity, including people with disabilities; (ii) development of a methodological guide for mainstreaming the diversity focus in rural W&S projects; (iii) preparation of a toolbox for mainstreaming the diversity focus in rural W&S projects; (iv) training for the staff of the executing agency in using the guide and the toolbox; and (v) strengthening the capacity of people with disabilities to get involved in projects/works, including the development of productive projects associated with access to W&S, depending on the type of disability.
- 1.28 **Local productive development.** As part of the program, training for women in masonry and in the installation of W&S systems and connections will be financed, which will spur the economy of the beneficiary locality by providing women with new skills that will permit them to work not only in the W&S sector, but in other others as well.

- 1.29 **Climate change.** This operation will finance investments in water in areas where climate change is predicted to result in greater threats of drought. These investments will not only help to narrow gaps in access to drinking water, but will also provide access to a continuous and reliable service year-round, particularly in the dry season, thereby helping to decrease the vulnerability of local communities to the impact of climate change on water availability. The sanitation solutions also include composters that help to reduce methane emissions.²¹ The operation is aligned with the Bank's Vision 2025, specifically in the crosscutting theme of climate change as part of Tier 1: Working toward Sustainable and Inclusive Economic Growth.

D. Viability analysis

- 1.30 **Technical viability.** The W&S works to be included in the program will be defined on the basis of feasibility studies and final designs that will allow them to be put to tender following approval by the PNSR. All the studies and designs will be done in accordance with current national standards. In each case, the solution adopted will be the alternative that is technically viable and that is agreed on by the local population. Climate change aspects will also be included with a view to increasing the resilience of infrastructure to climate risks and evaluating opportunities to reduce greenhouse gas emissions, such as the use of biogas generated by the biodigesters used in the sanitation solutions, where applicable. The program's Operating Manual will define the procedures to be followed by the execution units. The IDB project team reviewed a representative sample of 43 W&S projects ([link 5](#)). The technical feasibility of the solutions has been adequately demonstrated for the majority of the projects in the sample. In cases where the projects were not viable, recommendations were made to update and adjust the dossiers.
- 1.31 **Socioeconomic viability.** The program will be developed as a global multiple works program for W&S. A sample of 43 projects was examined to determine socioeconomic viability. For the drinking water works, a cost-benefit analysis was performed in which the main benefits of the situation with the project were an increase in consumption and a savings of resources. Of the 43 projects analyzed, 93% are socioeconomically viable, with an internal rate of economic return (IRER) above 8%.²² Twelve projects in the sample included sewage systems as the sanitation solution. To determine the socioeconomic feasibility of these projects, a cost-benefit analysis was performed in which the benefit corresponds to the willingness of households to pay for the service. None of the sewerage projects is socioeconomically viable and therefore the technical solution and costs need to be revised. The 43 projects in the sample propose the installation of basic sanitation units as a sanitation solution. To determine their feasibility, a cost-benefit analysis was performed based on the limits established in the standards and similar projects already implemented. The effectiveness indicator used cost per person

²¹ An in situ comparison was made of greenhouse gas emissions of the different sanitation systems planned by PIASAR II using the [Energy Performance and Carbon Emissions Assessment and Monitoring \(ECAM\) Tool](#). The results show that systems that use composting technologies largely produce fewer greenhouse gas emissions (-29.14 kilograms of CO₂ equivalent per person per year, compared to the baseline). This is because the composting process is aerobic and produces almost no methane emissions.

²² In all, 74% of the water projects are viable using a discount rate of 12%.

and per type of basic sanitation unit. All the units are, on average, more cost-effective than their comparators. To determine the program's aggregate viability, an aggregate cost-benefit analysis was performed of the water and sanitation projects. The program is socioeconomically feasible with a net present value of S /125,936,131 and an IRR of 19%. All the analyses were complemented with sensitivity analyses ([link 9](#)). Projects to be financed by the program must be found to be economically viable²³ using the methodology defined in the ex ante economic evaluation.

- 1.32 **Institutional and financial viability.** The financial viability analysis showed that rates are established following the long-term marginal cost methodology, which considers operating and maintenance costs based on the volume of water sold over the program's horizon. The methodology used to calculate the rate determines a price that covers the operating and maintenance costs of the water and/or sanitation system. Financial sustainability is attained by charging rates that will cover the cost of operating and maintaining the systems. In the cases analyzed, the family user rates established cover the operating and maintenance costs of the systems and meetings were held with the community at which it was agreed that the W&S system would be operated by the JASS. The user rates will be updated to take account of factors such as inflation and differences in population density prior to starting execution of the works. Plans to strengthen the capacity of the JASS and the MTAs will be implemented which, coupled with the communication and sanitary education strategies for families, form the pillars for sustainability of the services ([link 4](#)).

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instrument

- 2.1 **Financing modality and structure.** This loan has been designed in the global multiple works modality, as the program calls for independent but physically similar projects that can be put into operation on an individual basis, and that will meet eligibility and prioritization criteria. The execution period will be six years as of the effective date of the loan contract.
- 2.2 **Cost and financing.** The program will cost a total of US\$232,279,758, of which US\$150,000,000 will be financed by the Bank from the Ordinary Capital and US\$82,279,758 by the local counterpart.

²³ Economic viability implies having an IRR above 8% or being the most cost-effective solution. The Ministry of Economy and Finance defines the methodology and parameters to be used for the socioeconomic evaluation of water projects in its [standards](#). The annex to the methodology defines a social discount rate for water and sanitation projects of 8%.

Table 2. Estimated program costs (US\$)²⁴

Component	IDB	Local	Total	%
Component 1. Water and sanitation projects	138,711,911	63,524,945	202,236,856	87
Subcomponent 1.1. W&S studies and works	133,315,920	61,100,659	194,416,579	84
Subcomponent 1.2. Social intervention and service management	5,395,991	2,424,286	7,820,277	3
Component 2. Service sustainability and strengthening for sector entities	9,090,830	4,084,286	13,175,116	5.7
Administration	1,257,259	14,670,527	15,927,786	6.9
Evaluation and audits	940,000	-	940,000	0.4
Total	150,000,000	82,279,758	232,279,758	100.0

- 2.3 **Representative sample.** A representative sample of 43 projects has been used to evaluate the W&S systems of communities of the coast, the Andean highlands, and jungle,²⁵ with populations ranging from 200 to 1,600, which make up 30% of the total program, equivalent to US\$69,800,000. The evaluation of the sample made it possible to define eligibility and prioritization criteria (paragraph 2.4).
- 2.4 **Eligibility and prioritization criteria.** The PNSR initially identified 167 projects to be included in the program, located in coastal, highland, and jungle areas. The eligibility criteria for each project to be financed by the IDB will be that: (i) they will be feasible from the socioeconomic,²⁶ legal (paragraph 3.6), technical (paragraph 1.30), social and environmental (paragraph 2.6), and financial (paragraph 1.32) standpoints; (ii) they will benefit rural communities; and (iii) they will not be classified in Category “A” of the Bank’s Environmental and Social Policy Framework (ESPF) and will not involve involuntary resettlement. The PIASAR PMU will submit evidence to the Bank in each annual work plan of compliance with all the eligibility criteria established for the projects included in it, for the Bank’s no objection. Communities will be prioritized using two criteria: (i) shortfalls in secure access to W&S coverage; and (ii) projects with approved technical files.
- 2.5 **Disbursement schedule.** Disbursement programming is presented in the following table.²⁷

²⁴ Costs per subcomponent and main activity are indicative.

²⁵ The provinces included in the sample were: Huanaco, Piura, Cajamarca, Junín, Tumbes, Ancash, La Libertad, Huancavelica, San Martín, Cusco, Lambayeque, Ucayali, and Ayacucho

²⁶ A project is socioeconomically viable if it has an IRER above 8% determined by a cost-benefit analysis or if the most cost-efficient alternative was selected following IDB guidelines.

²⁷ The disbursement period is six years owing to the number of interventions included in the program and based on the execution capacity demonstrated in PIASAR I (operation PE-L1226; 442/OC-PE).

Table 3. Disbursement schedule (US\$ millions)

Component	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
IDB	7.7	22.4	29.9	37.4	37.3	15.3	150.0
Local contribution	6.7	12.9	16.2	19.1	18.8	8.6	82.3
Total	14.4	35.3	46.1	56.5	56.1	23.9	232.3
%	6.2	15.2	19.85	24.32	24.15	10.29	100.0

B. Environmental and social risks

- 2.6 Pursuant to the Bank's ESPF, the program has been classified as a Category "B" operation as it will generate some adverse socioenvironmental impacts that can be caused by construction of the rural W&S infrastructure. The impacts will be localized, temporary, and moderate in size and will be addressed through easily accessible mitigation measures. An environmental and social management system (ESMS) is available that covers the specific framework for the program, identifies risks and impacts, and covers management, capacity, organizational skills, emergency preparedness and response, participation and consultation with interested parties, and monitoring and evaluation. An environmental and social analysis (ESA) was prepared including environmental and social management plans (ESMP) for the projects in the sample and an environmental and the social management framework for future projects, both of which form part of the ESMS. The socioenvironmental documents prepared for PIASAR I and the lessons learned were used as inputs. Because the program envisages nationwide rural coverage, some of the works will be carried out in campesino and native communities. The due diligence review did not identify impacts related to physical or economic displacement. Rights-of-way and acquisition of land (specifically donation) for program works will be required. During preparation of the technical files, consultations were held on projects in the sample and therefore additional activities prior to approval of the program will not be necessary. The results of the consultations include commitments/approvals by communities of the technical option, land availability, and payment of the household user fee. However, as part of the program's environmental and social action plan, new consultations will be required before the works begin, seeking to revalidate those agreements. The environmental/social documentation required by the ESPF and the environmental and social management report, specifically the ESMS, AAS/ESMP, and ESMF in their final versions, have been published on the Bank's website for the Board of Executive Directors. The environmental and social risk has been defined as moderate, as has the disaster risk.
- 2.7 Two medium-high socioenvironmental risks were identified during program preparation. The first is social (related to Components 1 and 2) and refers to loss of trust and community support during program execution, which would lead to delays in implementation or even paralysis of the works, and will be mitigated by: (i) offering workshops in sanitary and environmental education and use of W&S services; (ii) contracting specific personnel for social management (social manager) and for community relations; (iii) updating the technical files by validating the technical solution adopted, user roll, land donation, and rights-of-way agreements, which will reduce the risk of conflict during execution; (iv) implementing a mechanism for complaints and disputes from the start of the

work; and (v) including activities related to communication with beneficiaries in the program's communication plan.

- 2.8 A medium-high risk socioenvironmental risk was also identified (related to Component (1) that the environmental and social requirements might not be implemented by the contractor which could lead to conflicts with the community or generate environmental liabilities. This risk will be mitigated by: (i) including processes to update the environmental and social aspects of the technical file; and (ii) ensuring that the program's specific environmental and social requirements (with the respective budget) are included in the bidding documents for the works and supervisory services.

C. Fiduciary risks

- 2.9 Medium-high fiduciary risks were identified during program preparation relating to the dispersion of the bidding processes and potentially limited participation by suppliers of goods and services, which will be mitigated by the Bank's support and fiduciary supervision, with emphasis on adequate planning, and definition of an adequate procurement strategy. The fiduciary team will continue the risk identification and management process during execution.

D. Other risks and key issues

- 2.10 The high or medium-high program risks are presented below:

Risk	Type	Mitigation measures	Risk level
Inconsistencies may be found during execution in the contents of the technical file; accreditation of water availability and quality, and certificates declaring that the sites of the works are free of archeological remains. Findings of this kind could delay execution of the works.	Planning	Update the technical files (availability and quality of sources, approval of the technical solution by the public, etc.) prior to tendering the works.	High
The systems may not be properly administered, operated, or maintained by the operators, which would affect attainment of the program's results.	Sustainability	<ol style="list-style-type: none"> 1. Include success stories from PIASAR I in reducing arrears in the payment of family user fees. 2. Support the JASS and MTAs in the early months after the systems are started up and work with them on an action plan for sustainability. 3. Strengthen the capacity of the JASS and MTAs to properly manage, operate, and maintain the systems. 4. Assure post-construction technical assistance for the sustainability of the systems. 	Medium-high

III. EXECUTION ARRANGEMENTS, RESULTS MONITORING, AND EVALUATION

A. Execution arrangements

- 3.1 **Borrower and executing agency.** The borrower will be the Republic of Peru and the executing agency will be the Ministry of Housing, Construction, and Sanitation (MVCS) through the National Rural Sanitation Program (PNSR)²⁸ which, in turn, will act through the PIASAR Program Management Unit (PIASAR PMU). The PIASAR PMU, which reports to the PNSR, will be responsible for technical, administrative, socioenvironmental, fiduciary, and operational execution of the program, including general coordination and resource management. The PMU will have the following key personnel: (i) a general coordinator; (ii) a technical coordinator; (iii) an environmental specialist; (iv) a planning and budget specialist; (v) a monitoring and evaluation specialist; (vi) a treasurer; (vii) a social and community relations specialist; (viii) a financial-accounting specialist; (ix) a deputy manager for projects; (x) an institutional specialist; (xi) a procurement specialist; and (xii) a deputy manager for sustainability. The profiles of this core staff and the details of the execution plan will be included in the program Operating Manual. The core staff will be contracted and/or assigned after obtaining the Bank's no objection. The contract term for key staff should be at least one year, with the option to be renewed, and any change will require the Bank's prior no objection. The PMU will have the following functions, in particular: (i) preparing and periodically updating the multiyear execution plan, the annual work plan, and the procurement plan; (ii) selecting works, goods, and consulting services; (iii) supervising works and monitoring execution and evaluation, and socioenvironmental management; (iv) financial management in accordance with Bank policies; and (v) preparing and updating of semiannual program reports, including reports on environmental and social compliance and the risk matrixes.
- 3.2 To support the PMU, a committee to support program management will be formed within six months of the loan signature date. This committee will provide strategic guidance, monitor execution, and support the program management team. It will also issue an opinion regarding the change in the General Coordinator and key staff of the PMU. The committee will be comprised of: (i) two representatives of the Ministry of Housing, Construction, and Sanitation: one from: (a) the National Rural Sanitation Program (PNSR), who will chair the committee; and the other from (b) the Multiyear Investment Programming Office (OPMI) for the sector or another office that replaces it; (ii) a representative of the Ministry of Economy and Finance; and (iii) a representative of the Bank, who is allowed to speak but not vote. The specific functions of the Committee will be established in the program Operating Manual and will require the Bank's no objection.
- 3.3 **Execution arrangements.** The program's projects will be executed through an option to the "contract works" modality (construction companies). In the event the necessary legal frame is in place, the projects could also be executed through the "local executing unit" (núcleo ejecutor) modality since it was successfully used in

²⁸ The PNSR has experience in executing earlier IDB programs PE-X1004; GRT/WS-12127-PE and PE-L1226; 4442/OC-PE, and a financing program with the Japanese International Cooperation Agency (JICA).

PIASAR I ([4442/OC-PE](#)). The Guidelines for Project Execution, Post-execution, and Closure by local executing units will be used, if necessary.

- 3.4 **Program Operating Manual.** The program will be governed by the PMU's current Operating Manual which will be updated to reflect the needs and specific circumstances of the proposed program. The update will include the program cycle, the arrangements and tools for interagency coordination, and the engineering, environmental and social, and fiduciary specifications, among others ([link 6](#)).
- 3.5 **Special contractual conditions precedent to the first disbursement of the loan proceeds:** (i) The executing agency will have submitted evidence that the [program Operating Manual](#) has entered into effect under the terms and conditions previously agreed upon with the Bank, and that it includes the environmental and social requirements and annexes incorporating the environmental and social management system, the environmental and social management framework, and the environmental and social action plan; and (ii) the executing agency will have submitted evidence that it has assigned or begun the process of engaging the following personnel for the PMU, in accordance with the profiles and requirements previously agreed upon with the Bank: a general coordinator, a technical coordinator, a planning and budget specialist, a social and community relations specialist, an environmental specialist, a financial-accounting specialist, a deputy project manager, and a procurement specialist. These conditions are fundamental for ensuring that the borrower will be ready to commence program execution with a minimum of staff selected from within the executing agency and have a program Operating Manual that describes detailed guidelines on operational and coordination considerations.
- 3.6 **Special contractual conditions for execution.** Prior to the start of the W&S works in Subcomponent 1.1, the borrower, through the executing agency, will submit evidence that: (i) rights-of-way and/or authorization have been obtained for use of the land needed for the respective program works and that those rights-of-way and/or authorizations have been obtained pursuant to applicable national and local legislation; and (ii) an interagency cooperation agreement has been signed between the municipalities and the MVCS for administration, operation, and maintenance of the program's drinking water systems, in accordance with terms and conditions previously agreed on with the Bank. These conditions are included to ensure that the land needed has been obtained prior to the start of the works and that the necessary institutional arrangements between the different program participants are in place for adequate execution and AOM of the water systems.
- 3.7 **Procurement, disbursement, and audits.** Procurements financed in full or in part with loan proceeds will abide by the Policies for the procurement of works and goods financed by the IDB (document GN-2349-15) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-15). Use of the advance national system (including the subsystems for national competitive bidding, shopping, framework agreement, reverse auction, and individual consultants) approved by the Bank's Board of Executing Directors (document GN-2538-22 of 2017), will be used to the

extent envisaged in the respective approval and as provided in Annex III of this document. No direct contracts or the use of retroactive financing are anticipated.

- 3.8 Disbursements will mainly take the form of advances of funds or another modality established in the Financial Management Guidelines for IDB-financed projects (document OP-273-12). Advances of funds will conform to a financial plan that covers the program's actual liquidity needs for up to 180 days or some other term pursuant to aforementioned guidelines. Except for the first advance, subsequent advances will be processed when at least 50%²⁹ of the cumulative total of previous disbursements has been accounted for. To manage the funds, the executing agency will use the Treasury Single Account and will present annual audited financial statements in the terms and within the time frames required by Bank policies. The executing agency will select and contract an independent firm of auditors acceptable to the Bank for the duration of the operation. The material start of the works must begin within no more than two years after the loan contract has entered into legal effect.
- 3.9 **Operation and maintenance.** The borrower, through the executing agency, undertakes to take measures to ensure that the goods and works in the program are properly maintained in accordance with generally-accepted technical standards. The borrower, through the executing agency, will submit to the Bank during the disbursement period as part of the semiannual progress reports, a report on the status of those works and goods. If the inspections performed by the Bank or the reports that it receives show that maintenance is falling short of the agreed levels, the borrower, through the executing agency, will take the steps necessary to fully correct the shortcomings.

B. Monitoring and results evaluation plan

- 3.10 **Monitoring.** The PMU will prepare reports on progress and outcomes of the activities under its responsibility. The monitoring arrangements will include the procurement plan, the multiyear execution plan, the annual work plan, the results matrix, the semiannual progress reports, and the risk management plan. The executing agency will submit semiannual reports to the Bank reporting on the progress made, the results obtained, and an action plan for the following six months, within 60 days after the end of each semiannual period ([link 3](#)).
- 3.11 **Evaluation.** The PMU will contract: (i) a midterm evaluation, which will be presented within 90 days after the date on which 50% of the funds has been disbursed or after 30 months of program execution have elapsed, whichever occurs first; and (ii) a final evaluation within 90 days after the date on which 90% of the program's resources have been disbursed ([link 3](#)). The proposed evaluation methodology will be "before and after," with measurement of the outcome indicators after implementation of the interventions, and a comparison of measurements to determine achievement of the targets. The final evaluation will include an ex post economic evaluation whose methodology is detailed in the monitoring and evaluation plan ([link 3](#)).

²⁹ Because the workflow and processes related to authorizations and expenditure accounting require long periods of time for payments management, subsections (iii)(d) and (i) of paragraph 3.3 (Permanent Adjustment), Annex I, of the Financial Management Guidelines (document OP-273-12) will apply.

Development Effectiveness Matrix		
Summary		PE-L1269
I. Corporate and Country Priorities		
Section 1. IDB Group Strategic Priorities and CRF Indicators		
1. The Strategic Alignment tab in convergence shows alignment on IDB Group Strategic Priorities. The Results Matrix tab lists flagged CRF indicators		
2. The Strategic Alignment tab in convergence shows information on alignment to Country Development Objectives		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		8.8
3.1 Program Diagnosis		2.5
3.2 Proposed Interventions or Solutions		3.5
3.3 Results Matrix Quality		2.8
4. Ex ante Economic Analysis		10.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		2.5
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		1.0
5. Monitoring and Evaluation		9.5
5.1 Monitoring Mechanisms		4.0
5.2 Evaluation Plan		5.5
III. Risks & Mitigation Monitoring Matrix		
6. Overall risks rate = magnitude of risks*likelihood		Medium Low
The Environmental and Social Data tab in convergence shows the environmental and social risk classification of the project		
IV. IDB's Role - Additionality		
Annex III Fiduciary Arrangements describes project reliance on the use of country systems (VPC/FMP Criteria)		
7. Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		Yes
PE-L1269		PE-T1476

Evaluability Assessment Note:

The general objective of this operation is to improve the sanitary and environmental conditions of the prioritized rural areas of the country, by reducing the gap in coverage and quality of W&S services. The specific objectives are: (i) increase access and improve the quality of W&S services in rural population areas; (ii) promote sustainable management (operational and financial) of service provision; and (iii) generate new capacities for women and increase their participation in the provision of services and in leadership positions in the JAAS.

The operation has an appropriate diagnosis in which the problem is identified and quantified. Gaps in access to water and sanitation services between urban and rural areas are 17 and 59 percentage points, respectively. Considerable deficiencies in the quality of the water service and in access to water and sanitation in schools are also mentioned. The determinants associated to this problem are identified, however, the vertical logic of the project could be improved by clarifying the connection between the general objective and the third specific objective.

To achieve the specific objectives, the project will implement two components: 1) Potable Water and Sanitation Projects, with two subcomponents of studies and works and social intervention and service management; and 2) Management of service sustainability and strengthening of sector entities, which includes the gender interventions of the project. The proposed solutions are adequately linked to the identified problem. The results matrix (RM) reflects the vertical logic of the project and presents at least one SMART result indicator associated with each specific objective. The RM includes output and results indicators with their respective baseline values, goals, and means to collect the information.

The economic analysis presents a global expected rate of return of 19%, based on a sample of 43 projects that represent 30% of the total program, equivalent to US\$69.8 million. Considered individually, 93% and 74% of the projects are viable using a discount rate of 8% and 12%, respectively. The parameters used in the economic analysis are consistent with the RM.

The monitoring and evaluation plan is appropriate and includes an evaluation using an ex-post cost-benefit analysis and a retrospective evaluation applying a before-and-after methodology.

RESULTS MATRIX

PROGRAM OBJECTIVE:	The specific objectives of this operation are to: (i) expand access and improve the quality of water and sanitation (W&S) services in rural communities; (ii) promote sustainable management (operational and financial) of the services; and (iii) create new capacity for women and increase their participation in service delivery and leadership positions on the Sanitation Services Administration Boards (JAAS). Attaining these objectives will contribute to the general objective of improving sanitary and environmental conditions in priority rural areas of the country, by reducing the gap in coverage of W&S services.
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SPECIFIC DEVELOPMENT OBJECTIVES

Indicator	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	End of program	Comments/means of verification
Specific development objective 1. Expand access and improve the quality of W&S services in rural communities											
Households in the beneficiary communities with access to safe water ¹	Household	0	2022	0	0	4,000	8,000	12,000	15,000	15,000	Means of verification: Report approving the technical and financial closure Responsible agency: PIASAR Program Management Unit (PIASAR PMU)
Households in the beneficiary communities with access to safe sanitation ²	Household	0	2022	0	0	4,000	8,000	12,000	15,000	15,000	
Public institutions and social organizations in the beneficiary communities with inclusive access to safe W&S	Institution	0	2022	0	0	150	300	450	600	600	Public institutions and organizations are: (i) schools; (ii) health centers; and (iii) social organizations (community kitchens, churches, community meeting halls) Means of verification: Report approving the technical and financial closure Responsible agency: PIASAR PMU

¹ Access to safe water means that all households have an on-premises water source (inside the house, on the patio or lot) which is available when needed (sufficient water is available for at least 12 hours a day) and free from contamination (complies with microbiological and chemical standards).

² Access to safe sanitation means that a household has a sanitary installation that is not shared with other households and that treats waste in situ or elsewhere without posing a health risk.

Indicator	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	End of program	Comments/means of verification
Specific development objective 2. Promote sustainable operational and financial management of the services											
Water systems that are appropriately operated by the JASS	System	0	2022	0	0	0	50	100	150	150	A system is considered to be operating appropriately when it meets the technical design specifications. ³ Means of verification: PMU report based on JASS operating reports
JASS whose operating income covers the cost of administration, operating, and maintenance (AOM)	JASS	0	2022	0	0	0	0	0	90	90	Means of verification: PMU report based on JASS financial reports Responsible agency: PIASAR PMU
Specific development objective 3. Create new capacity for women and increase their participation in service delivery and leadership positions on the JAAS											
Women certified in masonry or in installation of W&S systems and connections	Individual	0	2022	0	50	150	200	300	300	300	Means of verification: PMU report with a list of women who have received certification
Percentage of JASS with a female president, secretary, or treasurer	Percentage	0	2022	0	0	25	25	25	25	25	Percentage of all JASS in the program Means of verification: JASS articles of incorporation Responsible agency: PIASAR PMU

³ Water quality Regulation DS031-2010-SA-DIGESA. Approval of “Technical design standard. Technological options for rural sanitation systems.” Ministerial Resolution 192-2018-VIVIENDA.

OUTPUTS

Indicator	Unit of measure	Associated specific objectives	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final	Comments/means of verification
Component 1. Water and sanitation projects												
Subcomponent 1.1. W&S studies and works												
Project technical designs disseminated to and validated with the community	Meeting report	1	100,000	0	20	45	42	35	25	0	167	Project technical designs are disseminated prior to updating the technical file. Means of verification: semiannual report
Final project studies updated, which include climate change considerations	Study	1	5,112,773	0	20	45	42	35	25	0	167	Means of verification: semiannual report
Drinking water systems in rural communities built or upgraded	System	1	75,681,522	0	0	30	30	40	40	27	167	A system is considered built once construction is completed (prior to orthotolidine-arsenite (OTA) testing Means of verification: report approving the technical and financial closure
Basic sanitation units built in rural communities	Basic sanitation unit	1	113,522,285	0	0	2,700	3,000	4,000	4,000	2,402	16,102	The basic sanitation units built in schools and health posts are inclusive. The sanitation projects include complementary projects for final wastewater disposal. Means of verification: report approving the technical and financial closure

Indicator	Unit of measure	Associated specific objectives	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final	Comments/means of verification
Subcomponent 1.2. Social intervention and service management												
Communities trained in sanitary and environmental education and use of W&S services	Community	2	3,152,693	0	0	20	40	40	40	27	167	Communities trained includes: (i) sanitary and environmental education workshops; (ii) use of W&S services; and (iii) complaint and dispute mechanisms. Means of verification: semiannual report
JASS trained to administer, operate, and maintain W&S services	JASS	2	2,800,550	0	0	20	40	40	40	27	167	Trained includes: account management, rate collection, and preparation of annual work plans Means of verification: semiannual report
Rural municipal technical areas (MTAs) trained to provide technical assistance for the JASS	MTA	2	1,867,033	0	0	20	40	40	40	27	167	Trained includes: management, administration, and operation of sanitation services Means of verification: semiannual report
Component 2. Service sustainability and strengthening for sector institutions												
JASS equipped to administer, operate, and maintain W&S services	JASS	2	1,759,386	0	0	30	40	42	42	18	167	Equipped includes: procurement of equipment, furniture, and tools for AOM Means of verification: semiannual report
W&S services that receive post-construction strengthening	System	2	125,000	0	0	25	25	50	50	17	167	Consultant's report based on documents evaluating the systems and adjustment and strengthening plans.

Indicator	Unit of measure	Associated specific objectives	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final	Comments/means of verification
OC training and certification program implemented to administer, operate, and maintain W&S services	Program	2	100,000	0	0	0	1	0	0	0	1	Trained includes: management, administration, and operation of sanitation services Means of verification: semiannual report
MTAs or municipal management unit (MMU) equipped to provide technical assistance for the JASS	MTA/MMU	2	6,923,355	0	0	20	30	50	50	17	167	Equipped includes: computers, transportation, instruments to measure chlorine, and operating manuals Means of verification: semiannual report
Regional housing, construction, and sanitation departments (DRVCS) and CAC trained to provide technical assistance for the MTAs	DRVCS/ CAC	2	1,240,125	0	0	6	4	4	2	2	18	Trained in managing the sustainability of the W&S services Means of verification: semiannual report
Water systems with assisted technical operation concluded	System	2	737,250	0	0	30	30	40	40	27	167	Means of verification: semiannual report
System to monitor construction of W&S projects implemented in the PNSR	System	2	450,000	0	0	0	0	0	0	1	1	
System to oversee the quality of post-construction services implemented in the PNSR	System	2	125,000	0	0	0	0	0	0	1	1	

Indicator	Unit of measure	Associated specific objectives	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final	Comments/means of verification
Gender and diversity strategies designed and implemented	Strategy	3	186,000	0	0	0	0	0	0	1	1	
Milestones:												
• Methodological guide on gender and diversity developed	Guide			0	0	2	0	0	0	0	2	Means of verification: guide developed and disseminated
• Toolbox developed	Toolbox			0	0	2	0	0	0	0	2	Means of verification: consultant's report
• Training for managers and PIASAR PMU	Training			0	0	0	3	0	0	0	3	Means of verification: semiannual report
• Training for MTAs	Training			0	0	0	1	0	0	0	1	
• Regional work groups	Workshop			0	0	0	6	6	6	0	18	
Rural Water and Sanitation Supply Diagnostic System (DATASS) adapted to incorporate gender and diversity and financial sustainability aspects	System	3	50,000	0	0	0	1	0	0	0	1	Means of verification: updated DATASS manual
Women trained in masonry	Women	3	372,000	0	100	350	350	300	173	0	1,273	Corresponds to the number of women living in 15% of program households Means of verification: semiannual report
Women trained in installation of W&S systems and connections	Women	3	293,000	0	100	350	350	300	173	0	1,273	
Program communication plan designed and implemented	Plan	2	814,000	0	0	0	0	0	0	1	1	Means of verification: final report

Country: Peru

Division: WSA

Operation number: PE-L1269

Year: 2022

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Executing agency: Ministry of Housing, Construction, and Sanitation (MVCS)

Project name: Comprehensive Rural Water and Sanitation Program, Phase II (PIASAR II)

I. Fiduciary context of the executing agency

1. Use of country systems in the operation (any system or subsystem approved subsequently may be applicable to the operation, depending on the Bank's terms of validation).

<input checked="" type="checkbox"/> Budget	<input checked="" type="checkbox"/> Reports	<input checked="" type="checkbox"/> Information system	<input checked="" type="checkbox"/> National competitive bidding (NCB)
<input checked="" type="checkbox"/> Treasury	<input type="checkbox"/> Internal audit	<input checked="" type="checkbox"/> Shopping	<input checked="" type="checkbox"/> Other
<input checked="" type="checkbox"/> Accounting	<input checked="" type="checkbox"/> External control	<input checked="" type="checkbox"/> Individual consultants	<input checked="" type="checkbox"/> Other

2. Fiduciary execution mechanism

<input checked="" type="checkbox"/>	Special features of fiduciary execution	The executing agency will be the MVCS through the National Rural Sanitation Program (PNSR) which, in turn, will act through the PIASAR Program Management Unit (PIASAR PMU). The PIASAR PMU, will be responsible for technical, administrative, socioenvironmental, fiduciary, and operational execution of the program, including general coordination and resource management.
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3. Fiduciary capacity

Fiduciary capacity of the executing agency	Since this operation belongs to the group of operational excellence pilot projects, in accordance with that program and considering that the executing agency is executing an operation with Bank financing and under Bank policies, an institutional capacity assessment was deemed unnecessary.
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4. Fiduciary risks and risk response

Risk type	Risk	Level	Response
Goods and services	Companies may not be interested in participating in the tenders (NCB) on account of the remoteness and the size of the contracts, which could delay programming of Component 1.	Medium-high	Establish bid packages that include a sufficient number of interventions and focus on a given geographic region to attract the interest of contracting firms.

Risk type	Risk	Level	Response
Human resources	If the PIASAR PMU does not have the necessary staff, startup of the program could be delayed, leading to higher costs and longer implementation times.	Medium-low	Ensure that the PIASAR PMU technical and administrative staff identified in the execution plan are contracted to attend to the startup of the program, taking care of tasks that overlap with the close of PIASAR I.

5. Policies and guidelines applicable to the operation: The Financial Management Guidelines for IDB-financed Projects (document OP-273-12), the Disbursement Guidelines, the Audited Financial Reports and External Audit Management Handbook, the Policies for Procurement of Goods and Works Financed by the IDB (document GN-2349-15), and the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-15).

6. Exceptions to Bank policies and guidelines: None.

II. Considerations for the special provisions of the loan contract

Exchange rate: To determine the equivalence of an eligible expenditure made in the local currency of the borrowing member country with the currency of disbursement (approval currency), for reporting purposes and justification of expenditures, the effective rate on the date of conversion of the currency of approval or disbursement into the local currency will be used (Article 4.10(b)(i) of the General Condition of the loan contract). To determine the equivalence of expenditures incurred in local currency from the local contribution or for reimbursements of expenditures chargeable to the borrower, the exchange rate will be that in effect on the date that the borrower, the executing agency, or any other person or legal entity empowered to incur expenditures makes payment to a beneficiary.

Audits: The program's financial statements will be audited by an external audit firm acceptable to the IDB, annually within 120 days after the end of each financial year and 120 days after the end of the original disbursement period or any extensions thereof. The terms of reference will be agreed on previously with the Bank.

III. Agreements and requirements for procurement execution

<input checked="" type="checkbox"/>	Bidding documents	For procurements of works, goods, and nonconsulting services under the procurement policies (document GN-2349-15), subject to international competitive bidding (ICB), the Bank's standard bidding documents will be used or documents agreed on by the executing agency and the Bank for a specific procurement operation. The selection and contracting of consulting services will be based on the Policies for the Selection of Consultants (document GN-2350-15) and the standard request for proposals issued by the Bank or agreed on by the executing agency and the Bank for a specific selection will be used. The technical specifications and terms of reference for procurement operations will be reviewed by the project's sector specialist during preparation of the selection processes. This technical review may be ex ante and is independent of the procurement review method.
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<input checked="" type="checkbox"/>	Use of country systems	As the Board of Executive directors has approved the advanced use of Peru's national procurement system (document GN-2358-22 of 2017), that system may be used after completion of the actions included in the "Report on acceptance of the use of Peru's national procurement system" and before modification of the procurement plans. The electronic reverse auction and electronic framework agreement catalog subsystems can be used once recommendations regarding their use have been implemented may be used once the recommendations have been implemented.
<input checked="" type="checkbox"/>	Procurement supervision	The supervision method will be ex post, except in cases in which ex ante supervision is justified. For procurement operations made through the national system, supervision will be performed by the country's national supervision system. The method of supervision, i.e. (i) ex ante, (ii) ex post or (iii) national system, will be determined for each selection process. Ex post reviews will be conducted annually, based on the project supervision plan, subject to changes during execution. Ex post review reports will include at least one physical visit (an inspection to verify the existence of the procurements, leaving verification of their quality and compliance with specifications to the sector specialist) to selected procurement processes subject to ex post review (not less than 10%). In the event physical visits cannot be conducted, virtual sessions will be arranged. The thresholds for ex post review are as follows:

Works	Goods/services	Consulting services
US\$3,000,000	US\$250,000	US\$200,000 firms US\$50,000 individuals

Main procurement items

Description	Selection method	New procedures/ tools	Estimated date	Estimated amount (US\$)
Goods				
Equipment for the Sanitation Services Administration Boards (JASS) (procurement package to be separated into intervention packages)	ICB			1,759,386
Works				
Package 4: 10 water and sanitation (W&S) projects in the Junín region	ICB			7,560,853
Package 3: 7 W&S projects in the San Martín region	ICB			8,735,275

Nonconsulting services				
Training for the municipal technical areas (MTAs) (implementation may be broken down by packages of works)	ICB			1,867,033
Training for the JASS (implementation may be broken down by packages of works)	ICB			2,800,550
Firms				
Consulting services to update the technical files of projects not in the sample (this item will be broken down by packages of projects approved by locality and by priority)	Quality and cost-based selection (QCBS)			3,836,008
Consulting firm for works supervision of the other water projects outside the program sample (this item will be broken down by packages of projects approved by locality and by priority)	QCBS			2,153,646
Individuals				
Individual consulting services to support local governments (53 contracts for 6 months each)	Individual consultant (3CVs)			5,652,000

Since this is a pilot operational excellence project, instead of an 18-month procurement plan, it is included in the "[Main Expenses](#)" tab.

IV. Agreements and requirements for financial management

<input checked="" type="checkbox"/>	Programming and budget	Expenses related to program activities will have been assessed for viability within the framework of the regulations issued by the Ministry of Economy and Finance (MEF). At present, the National Multiyear Programming and Investment Management System (Invierte.pe) is in effect to streamline the approval of investment projects and make their execution more flexible at all three levels of government. The annual programming and budget will be prepared on the basis of guidelines issued by the MEF's Public Budget Bureau. The budget of the PNSR comprises ordinary resources from the MEF intended to finance a portion of a specific program. The project calls for the local contribution to finance the general sales tax (IGV) costs and part of the administrative costs of the program. The Multiyear Project Execution Plan will be prepared and used to formulate the annual budget, taking account of the project disbursement schedule. The budget allocated to the project will be approved by the MEF and the Congress and reported
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		annually to the Bank. The budget will be administered through Integrated Financial Management System (SIAF) modules.
<input checked="" type="checkbox"/>	Treasury and disbursement management	<p>The country's public debt and treasury systems will be used following the directives issued by the National Treasury Department. Expenditure is subject to the budgetary and financial execution process, with data being recorded in SIAF (administration module and project execution module—MEP) as the expense is formally processed under the regulatory framework applicable to each of its stages: commitment, accrual, authorization, and payment. The PMU will administer the funds through the Treasury Single Account.</p> <p>Disbursements will be made according to the program's actual liquidity needs (financial planning). The PMU will submit the disbursement request to the Bank, together with a financial plan that will initially project expenditure for up to 180 days. A new disbursement will only be made when at least 50%⁽¹⁾ of the cumulative total of previous disbursements has been accounted for, using the Bank's forms.</p> <p>(1) Because the workflow and processes related to authorizations and expenditure accounting require long periods of time for payments management, subsections (iii) (d) and (i) of paragraph 3.3 (Permanent Adjustment), Annex I, of the Financial Management Guidelines (document OP-273-12) will apply.</p>
<input checked="" type="checkbox"/>	Accounting information systems and reporting	<p>SIAF-MEP will be used. These systems provide transparency and specific controls in accounting and reporting. Cash-based accounting and international accounting standards will be used, following the directives of the National Public Accounting Bureau. All documents and records will be retained for a minimum of three years after the final disbursement. Expenditures that the Bank deems ineligible will be charged to the local contribution. As a complement to the policies and guidelines applicable to the operation, the program Operating Manual will be used, with its documented definition of workflows and internal controls.</p>
<input checked="" type="checkbox"/>	Internal control and internal audit	<p>The executing agency's control, communication, and information and activities monitoring are governed by the loan contract, the program Operating Manual, and local regulations, which are based on the Law governing the National Control System and the regulations of the Office of the Comptroller General (CGR).</p>
<input checked="" type="checkbox"/>	External control and financial reports	<p>The ex post review of records and supporting documentation for activities and transactions will be performed by external auditors. According to the CGR (lead agency of the National Control System) and its regulations, external audits of projects are outsourced to independent audit firms acceptable to the Bank. The firms are evaluated periodically by the Bank. The CGR authorizes the process of selecting and contracting the audit firm, which is the responsibility of the executing agency under Bank policies, for the entire program execution period, including extensions of the final disbursement. The program's financial statements include: the cash flow statement, the cumulative investment statement, and the notes to the financial statements. The auditor's report will include an evaluation of the internal control system. The external audits will be covered by the loan proceeds.</p>

<input checked="" type="checkbox"/>	Financial supervision of the operation	May be adjusted depending on program execution and the external auditor's reports. Activities include a biannual review of the portfolio with the executing agency, a review of disbursement requests four times a year, and an annual financial supervision visit.
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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/22

Peru. Loan ____/OC-PE to the Republic of Peru. Comprehensive Rural
Water and Sanitation Program, Phase II (PIASAR II)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Peru, as borrower, for the purpose of granting it a financing aimed at cooperating in the execution of the Comprehensive Rural Water and Sanitation Program, Phase II (PIASAR II). Such financing will be for the amount of up to US\$150,000,000, from the resources of the Bank's Ordinary Capital and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ____ 2022)