INCENTIVES FOR SEWERAGE CONNECTION

A successful case in the periurban area of Lima, Peru

Authors:

Lourdes Álvarez and Tania Páez

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Lima's Drinking Water and Sewerage System (SEDAPAL)

SEDAPAL is a state-owned company established as a corporation under private law. It serves the Province of Lima, the Constitutional Province of Callao, and other provinces, districts and areas within the department of Lima. Its objectives are to provide water and sanitary sewerage services as well as the operation, maintenance, control, and development of basic services and the supply of projects, financing, works execution, and advisory and technical assistance on water and sanitary sewerage services.

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The IDB is a source of multilateral financing that aims to promote economic, social and institutional development in Latin America and the Caribbean. Its strategy is oriented towards closing the economic and social gaps between rural and urban areas and boosting economic productivity in order to promote inclusive and sustainable growth in the region. In the water and sanitation sector, the IDB seeks to ensure universal and sustainable access to high quality water, sanitation, and solid waste management services to contribute to sustainable growth in its Latin American and Caribbean member countries and to improve the living standards of their citizens. The current IDB priority areas in the water sector are: 1) expanding access to quality services for low income and vulnerable populations, and promoting ample and sustainable solutions; 2) improving sectoral governance and financial sustainability; and 3) incorporating the concept of water security in the sector, particularly by way of expanding wastewater treatment coverage, protecting the supply basins and reducing flood risks.

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"Water.org" is an international NGO with 25 years' experience trying to improve access to safe water and sanitation for homes through small, affordable loans. We currently are active in Asia, Africa, and Latin America, where we have offered access to safe water and sanitation to 27 million people. Together with 132 partners around the world, Water.org has helped mobilize more than $2.0 billion in capital to support small loans that bring access to safe water and sanitation. The Water.org model focuses on developing financial products for families that cannot afford to pay for the connection to water services or that are seeking to improve the quality of access to these services. Water.org works chiefly with financial institutions specializing in microfinances, and develops with them a system of credits based on client evaluation that goes beyond their potential clients' income, to include family members income, their social standing, and the seasonality of their earnings. This allows it to reach out to low income clients who typically have no access to the traditional banking system.

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ACRONYMS

ESGP	Environmental and Social Government Plan
IDB	Inter-American Development Bank
INEI	Instituto Nacional de Estadística e Informática (National Institute of Statistics and Informatics)
JMP	Joint Monitoring Program
LAC	Latin America and the Caribbean
MVCS	Ministerio de Vivienda, Construcción y Saneamiento (Ministry of Housing, Construction, and Sanitation)
NGO	Non-governmental organization
PNSU	Plan Nacional de Saneamiento Urbano (National Program for Urban Sanitation)
SDG	Sustainable Development Goal
SEDAPAL	Servicio de Agua Potable y Alcantarillado de Lima (Lima's Drinking Water and Sewerage System)
SPT	Special Projects Team
W&S	Water and Sanitation

INTRODUCTION

SOURCE: **CONACCIÓN**

I. INTRODUCTION

One of the main challenges of the water and sanitation sector (W&S) for the attainment of Sustainable Development Goal (SDG) No. 6, "Ensure availability and sustainable management of water and sanitation for all," is overcoming the low levels of access to safely managed W&S services[1], particularly in the case of sanitation, and improving the low quality of the services that a large number of people still receive. According to the United Nations' Joint Monitoring Program (JMP), in 2017 some 2.2 billion people around the world lacked safely managed water services and nearly twice as many, 4.2 billion, lacked access to adequate sanitation services (JMP, 2019).

In Peru, the National Census found that in 2019 more than 24 million people throughout the country (74.9%) had access to the public sewerage system (either reaching the home or the building where the home is located); the remaining 25.1% used other means to eliminate the waste, such as septic tanks or cesspits, or had no facilities at all and resorted to open air defecation (INEI, 2020). Living in either a rural or urban area still makes a big difference in terms of access to services: in 2019, only 3.2% of those living in urban areas had no access to any type of sanitation solutions, vs. 21.7% of those living in rural environments (INEI, 2020).

Aside from access, another major challenge for the water and sanitation sector is actual connectivity, in particular to the sewer system. Several studies have shown that connectivity levels to the sewerage network in Latin America and the Caribbean (LAC) range between 25% and 40% of the population that could access the service (Gertner, 2016). This state of affairs, coupled with inadequate conditions of sanitation services at homes[2], leads to a failure to achieve the expected benefits from investments in sewer networks, such as health improvements, more work productivity, and enhanced educational performance of the population with access to the service (IDB, 2017).

There are a variety of factors playing a role in the levels of connectivity of a given population, including financial or liquidity barriers (construction, installation, and connection costs); knowledge barriers (of the existence of the network and/or of the benefits of connecting to the system); behavioral barriers (prevailing habits regarding the disposal and handling of excreta, prioritization of sewage services vs. other household services); access barriers to inputs for connectivity (particularly in the poorest and remotest areas); administrative barriers (transaction and paperwork costs); legal barriers (home ownership rights); infrastructure barriers (households located in hard-to-access sites), etc. (Sturzenegger, 2017). There are also other factors, associated with the sector's institutionality in each country, often with limited financial and human resources, which prioritize the implementation

1 Safely managed water includes water for human consumption originating in an improved water source (pipes, boreholes, tube wells, protected drilled wells, protected springs, rainwater, and bottled or distributed water) located either at the property or at the piece of land, available when needed and free from fecal or priority chemicals contamination. Safely managed sanitation services include the use of an improved fixture (such as syphon toilets or low consumption syphon toilets connected to the sewer network, septic tanks or pit latrines, ventilated improved pit latrines, compost latrines, or simple pit latrines with slabs) that are not shared with other households and where the waste is eliminated safely either on site or transported and treated at an external facility (JMP, 2017).

2 In 2015, a study conducted in 15 periurban districts of Lima showed that only 22% of the served population had adequate bathrooms. The remaining 78% either had no bathroom or had precarious bathroom facilities (World Bank, 2016).

of programs focusing on the expansion of W&S service coverage. Typically, this approach does not contemplate actions with the population to ensure that homes get connected to the service, be it through the promotion of adequate home sanitary appliances or incentives for connecting to the service (technical assistance, promotion of specific products –such as types of toilets– financing options, etc.), which limits the scope of the main objective of these consumer services.

According to the latest national census conducted in 2017, Lima's Metropolitan Region, comprising the provinces of Lima and Callao, was home to one-third of the country's population, with nearly 9.56 million people[3] (INEI, 2017). The city of Lima has grown in an unplanned manner, expanding towards its periphery, an area characterized by high levels of poverty and lack of basic services. While there is evidence of an increase in the degree of access to the sewer network in recent years in Lima's Metropolitan Area –going from 88.4% in 2012 to 92.7% in 2017–, the available data provides no details on the actual level of connectivity to the networks built or on the quality of the service provided to consumers.

Lima's Drinking Water and Sewerage System (SEDAPAL) serves the provinces of Lima and Callao, and its main objective is to improve and expand drinking water and sewerage services to the population in order to close the coverage gap and provide quality services. In 2011, SEDAPAL and the Inter-American Development Bank (IDB) approved the Cajamarquilla, Nievería, Cerro Camote, Expansion of the Drinking Water and Sewer Networks of Sectors 129, 130, 131, 132, 134, and 135, District of Lurigancho and San Antonio de Huarochirí System[4] (hereafter, Cajamarquilla Project) under which services were expanded to provide water and sewerage services to 100,000 people. In addition, a number of measures were taken to encourage connectivity, with impressive results: by March 2020 –the time when the system went into full operation after the works were completed in October 2019– connectivity to the sewerage network reached 98%, a much higher level than other similar experiences elsewhere in the LAC region (Sturzenegger, 2017). These actions were led by SEDAPAL in collaboration with the IDB and support from Water.org for the incentives through microfinances.

This paper presents the systematization of the successful experience of incentives for connectivity to the sewerage network under the Cajamarquilla Project. Following this Introduction, Chapter II presents the project's main characteristics and the main players participating in the activities implemented to foster connectivity. Chapter III showcases the main results associated with connectivity to the sewerage network, Chapter IV presents the lessons learned, and Chapter V the Conclusions of this experience.

3 In 2017, Lima was the most populated province, with 8,574,974 inhabitants; Callao had 994,494 inhabitants (INEI, 2017).

4 Due to the size of the drinking water and sewage systems and the population growth in the area covered by SEDAPAL, the company implemented a system of sectors (comprising areas under 3 km^2) and of works and projects to improve service and ensure better control of the volumes supplied (Orellana et al., 2019).

EXPANSION OF THE WATER AND SEWER SYSTEMS IN CAJAMARQUILLA, NIEVERÍA, AND CERRO CAMOTE

SOURCE: **SEDAPAL**

II. EXPANSION OF THE WATER AND SEWER SYSTEMS IN CAJAMARQUILLA, NIEVERÍA, AND CERRO CAMOTE

Over the past few years SEDAPAL has been implementing the National Program for Urban Sanitation (PNSU, after its Spanish initials) launched by the Ministry of Household, Construction and Sanitation (MVCS) for Lima and Callao with the aim of expanding W&S coverage to reach areas that were lacking the services, and of implementing social intervention actions on sanitation education issues. Within this framework, the Cajamarquilla Project was launched in 2011 with financing from the IDB and executed by SEDAPAL's Special Projects Team (SPT), a unit of the Projects and Works Management Office. The total cost of the project was US$118,303,753, of which US$100.00 million came from an IDB loan and the rest from government counterpart funding. The project included three components: (i) building the water system (studies and works design, purchase of land, construction of civil works, structures, equipment, hydraulic installations, major drinking water pipelines, secondary networks, connections to users' property lots, water meters, and social promotion); (ii) construction of the sewerage system (studies and works design, purchase of land, construction of civil works, structures, equipment, hydraulic installations, sewer networks, connections to users' property lots, social promotion); and (iii) construction of the system for proper final disposal of wastewater (studies and works design, purchase of land, construction of civil works, ducts and relief collector leading to the wastewater treatment and sludge final disposal plant).

The Project's general objective is to contribute to improve access to drinking water and adequate final disposal of wastewater services in SEDAPAL's area of coverage. The expected impacts were associated with (i) improving living conditions of the Cajamarquilla Project beneficiaries; (ii) improving the population's health and hygiene; (iii) reducing the incidence of waterborne diseases; (iv) reducing the infectious disease vectors; and (v) raising the value added to property due to the direct access to water and sewage services.

After project completion in 2019, a total of 19,114 homes within the Cajamarquilla, Nievería, and Cerro Camote sectors gained access to water services and 19,139 to sanitation services5. Of these, 98% of the homes (a total of 18,697 homes housing 97,224 people6) connected to the drinking water and sanitation systems at the time the system went into full operation – many more than the 89,274 people expected to access the system when the Project was designed.

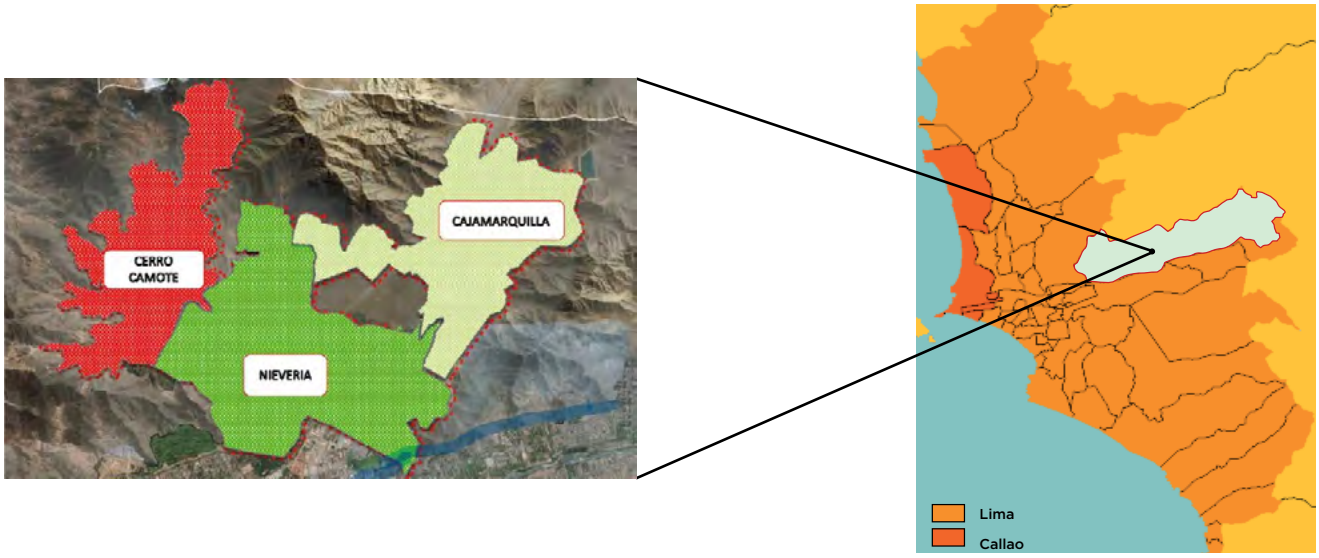
At the time of Project design in 2009, the population in its areas of intervention was characterized by low wages (S./855.56 a month, or some US$285.00), with poverty running at 15-20% in the districts

5 Twenty-five homes in a block on the north-side of the area of intervention received only sanitation services from SEDAPAL because that point could not be reached by the water pipeline; these households received water from the municipality by alternative means, with limited availability and inadequate quality. However, SEDAPAL expects its network to reach that point sometime in the future.

6 Number of people in the area of intervention according to SEDAPAL: 5.2 persons per household.

of Lurigancho and San Antonio Huarochirí , which are amongst the poorest in the Lima region (INEI, 2020b). Water was provided to the population in these areas mostly by tanker trucks (63%) and public cisterns (17%), whereas sewerage consisted of pits (50%), latrines (38%), or open air disposal (12%). By 2009, only 20% of the population in the area of intervention was connected to drinking water networks, which were built by nongovernmental organizations (NGOs), municipalities, or by citizens themselves and could not guarantee good quality or service continuity. Eight percent of the population was connected to sewerage networks that discharged effluents into the River Huaycoloro without any kind of previous treatment.

Figure 1. Project intervention areas



Source: SEDAPAL

Figure 2. Project intervention areas

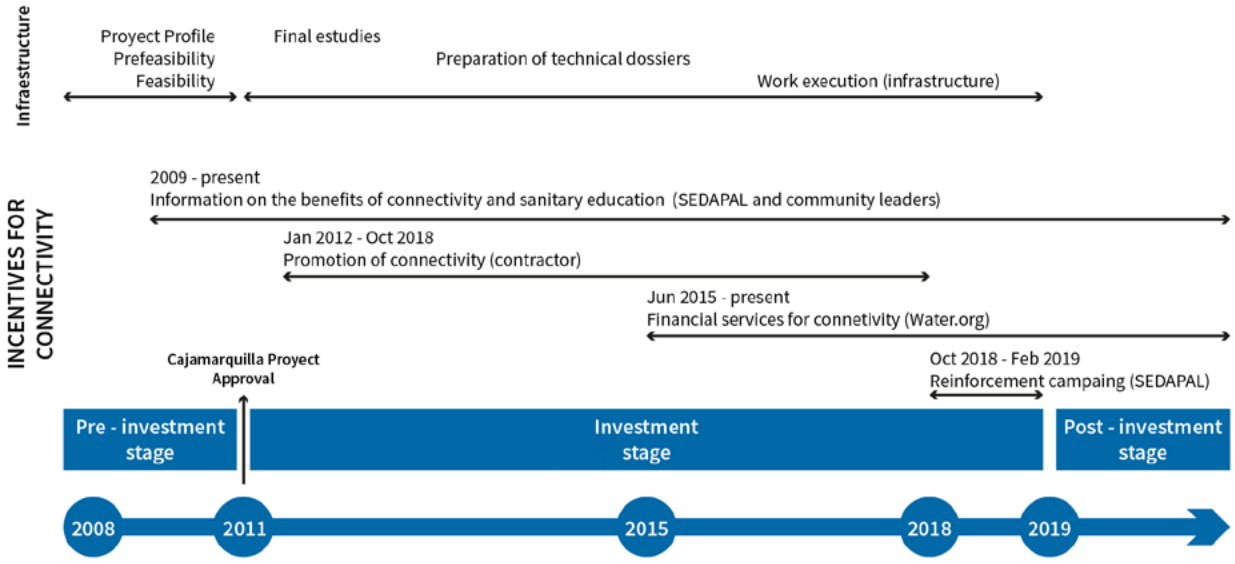
Source: IDB supervising team

As we have already seen, building infrastructure to improve access to sewerage systems does not translate into a direct benefit to the population unless users connect to it and install adequate sanitary modules (at least, a toilet and a sink. See Annex 3). With Project Cajamarquilla, SEDAPAL implemented a number of strategies to encourage connectivity, all of which were successful. One of the key strategies was to link the two services –drinking water and sewers– and put them both on a single bill. As we shall see in the next chapter, these strategies began at pre-investment stage (2008-2011) and were deployed during Project execution (2021-2019). The drinking water and sanitation services went into operation in October 2019, with partial access to drinking water (two to three hours every other day, depending on the sector), until reaching full operational level (more than 20 hours a day) in February 2020, with the sanitation system working at full capacity throughout the area of intervention.

In general terms, the pre-investment stage is defined as that where the Project's profile, the prefeasibility study, and the feasibility are defined. During the investment stage, the final studies and the technical dossier are prepared and the Project is executed. There also is a third stage, called, post-investment stage, where the system's operation and maintenance, as well as evaluation processes and continuous improvements, are studied.

Figure 3 summarizes the Project's stages and the main activities related to infrastructure construction and to incentives for connectivity.

Figure 3. Cajamarquilla Project's main stages: infrastructure and incentives for connectivity



Source: authors own elaboration

This document provides an overview of the activities undertaken to encourage connectivity during the pre-investment and investment stages. It also includes some steps that could be taken during the post-investment stage in order to further incentivize connectivity.

INCENTIVES TO CONNECTIVITY: ACTORS, ACTIVITIES, AND RESULTS

SOURCE: **SEDAPAL**

III. INCENTIVES TO CONNECTIVITY: ACTORS, ACTIVITIES, AND RESULTS

A. ACTORS INVOLVED

The activities to stimulate connectivity within the Cajamarquilla Project involved several actors, each with a specific role. The Project leader was SEDAPAL which, through its SPT unit, underscored the importance of sanitation services and connectivity to improve the quality of life of the population involved. SEDAPAL's role included: a) provide direction and guidelines for the connectivity promotion actions, b) bring the stakeholders together and provide information on the Project, c) promote the importance and benefits of sanitation and stress the need to connect to the system, d) monitor actions and oversee consultancies' quality standards, e) encourage the emergence of local suppliers, f) assess the quality of the services offered, and g) review and complement connectivity promotion strategies. SEDAPAL's investment in activities associated with changing the populations' habits to incentivize connectivity was aimed at increasing company operating revenues and thereby improving services.

For its part, the IDB provided financing for implementing the intervention, technical assistance for Project management, support during execution, and monitoring of the consultancies' technical quality. In addition, the Bank played a key coordination role, designing intervention strategies for the different stakeholders and supervising strategy execution in order to ensure the Project achieved its intended objectives.

To improve connectivity rates in the phase right before putting the water and sewer systems into operation, Water.org, in partnership with the IDB, intensified its task of promoting microcredits in the area, where it was already working with some financial institutions, in order to foster construction of sanitary modules and sewerage network connections. Water.org implemented a specific strategy with microfinancing institutions focused on connectivity, producing promotion material, providing technical assistance to financial institutions teams for the promotion of W&S lending, and overseeing W&S credits in its area of intervention. For their part, the microfinancing institutions, with Water.org support, designed products and organized the financial supply, promotion strategies, and later monitoring of credit use and default rates.

Other key players in the connectivity promotion activities were the suppliers of materials and workmanship for home connections, and the services aimed at helping improve the sanitary modules (hardware stores, plumbers, gas fitters), who in some cases can also act as saving entities for some users by providing loans for construction materials and work. Lastly, the local population also played a key role, by deciding to build or install sanitary modules at their homes (a job typically done by family members themselves, master builders, bricklayers, etc.) and to connect to the sewage network.

As seen on Figure 3, a number of promotion and connectivity activities were conducted during Project pre-investment and investment stages, involving several players and following different strategies (door-to-door information campaigns, fairs, institutional information, etc.). Players' coordination and the diversification of actions yielded excellent results, surpassing by far the average sewer connection rates of other areas in the region.

This chapter explores the main activities in the following areas:

- Pre-investment stage (2008-2011): general information provided by SEDAPAL
- Investment stage (2012-2019) financed by the IDB: in this area the following actions stand out:
    - connectivity promotion (2012-2018): provided by the contractor
    - strengthening of connectivity and availability of adequate bathrooms (2018-2019): provided by SEDAPAL through a social consultancy in the investment area
    - information for financial services for connectivity and adequate bathrooms (2015-2020): provided by Water.org in the area or intervention, with specific reinforcement in 2019
- The current situation (March 2020)

B. PRE-INVESTMENT STAGE

During this stage studies were conducted to ensure Project viability, social and economic profitability, sustainability, and alignment with Peru's public policy principles.

The diagnosis conducted during the pre-investment stage in the Project's area of influence allowed not just to analyze some engineering aspects related both to construction and environmental issues, but also socio-economic aspects of the targeted population. It was determined that the demand (number of lots and households, among other issues) existed, and the population was informed about the Project by way of public assemblies – two assemblies for each scheme (Cajamarquilla, Nievería, and Cerro Camote), with an estimated participation of 1,500 people in each.

The messages conveyed in these assemblies dealt with incentives for installing adequate sanitary modules, the benefits of connecting to the network (quality of life, property value), the importance of safe sanitation services to fight disease, improve productivity and help the environment, and general aspects of the sanitary education.

This stage counted with the participation of SEDAPAL, a consulting team hired to handle social issues, and community leaders. SEDAPAL, as the leader of these promotion activities, directed and set out guidelines for the execution of these activities as well as their monitoring, observation of consultancies' quality standards, and evaluation of the quality of services to ensure they met the standards agreed upon during the promotion stage. SEDAPAL also developed specific campaigns for schools and markets in the area of intervention, adapting its message to each different audience in order to gain a higher degree of acceptance and a greater impact on key issues dealing with the importance of sanitation and connecting to the services.

The consultancy group hired by SEDAPAL coordinated with local leaders to conduct the promotion work and also was in charge of the assemblies, transmitting to the population the key messages defined by SEDAPAL. For their part, community leaders played a key role in ensuring the population participated in the awareness and promotion assemblies and acted as a nexus between SEDAPAL and the population, providing information about the Project and its benefits.

Results of this pre-investment stage include the participation of some 4,500 people from the intervention area (1,500 in each scheme) in the public assemblies, where they received key information about the Project and the benefits of safe sanitation, with adequate bathrooms and connection to the sewerage network. Community leaders were also provided with information on the need to install sanitary modules in each household and later to connect them to the public sewerage network, guiding the population and acting as links between SEDAPAL and the Project's beneficiaries.

C. INVESTMENT STAGE

1. Promoting connectivity

The investment stage (2012-2019) began when the Project was declared viable under Peru's public investment system; this included the preparation of the final environmental, archeological, and engineering studies, and the execution of the infrastructure works. Both in the studies' preparation (2012-2016) and during Project execution (2016-2018), activities related to the promotion of the sanitary modules and connection to the network were included.

During preparation of the final study and of the technical dossier (2012-2016), at every instance where there was contact with the population, they were provided with information on the benefits of connectivity and the need to install sanitary modules at their homes. Coordination with community leaders, who acted as mediators to spread information in the zone of intervention, was of the essence.

The activities conducted by the consultancy firm hired by SEDAPAL were the **group workshops and/or general assemblies.** Three general assemblies were carried out, one for each scheme, and each with 1,000-1,500 participants. In addition, several meetings were held with community leaders and small groups of local dwellers in order to gather information for the technical dossier and users' register. These activities were also used to inform people of the need to install a basic sanitary module (toilet and a basin). The materials used were informational leaflets approved by SEDAPAL (see Annex 1).

In this stage the messages dealt mostly with the need for homes to have adequate sanitary modules installed early so they could connect to the network when the infrastructure was ready. Participants in this stage included SEDAPAL, the hired company's consultancy team, and community leaders.

During the infrastructure works execution (2016-2018), the main actions associated with connectivity promotion were in the hands of the contractor company's social intervention team, as mandated by the bid documents prepared by SEDAPAL and approved by the IDB. This team comprised about 18 specialists on social issues and support personnel, who were in charge of all activities related

to relations with the population. This task was permanently supervised by 2 to 3 officials from SEDAPAL's social team.

The household verification stage focused on door-to-door visits to obtain information on users' properties for SEDAPAL's client database, and on the type of sanitary module installed in each home. When there was no sanitary module installed, users were instructed on the advantages of having at least a basic module. During these visits, the consultancy firm also handed out information and promotion material produced and/or approved by SEDAPAL. This material contained information on drinking water production and distribution in order to increase awareness of the service, the benefits of connecting to a safe W&S system, and the care of W&S services to ensure their sustainability. Also, on the importance of having a basic sanitary module ready so that when the service arrived, connection could proceed immediately and families could begin enjoying its benefits.

Two visits were conducted –between January and April 2017 and between January and March 2018– to all plots of land benefited by the program (initially, 17,128 plots that later rose to 19,235 when the area of intervention was enhanced). These visits helped determine what types of sanitary appliances were installed, although their quality and location were not determined. Neither was any data recorded on the path of the pipes inside the houses, or whether they collected water from washbasins, toilets, and/or showers. The second visit yielded higher values, as by that time construction was well under way in the area of intervention, which encouraged people to get their sanitary appliances ready for when the system went into operation.

Table 1. Door-to-door visits. Installed appliances verification (2017-2018)

Visit	With no sanitary appliances	Toilet	Shower	Multi-purpose basin	Handwashing basin	Kitchen basin	Water pipes	Drain pipes
First (2017)	11,822	4,750	4,340	2,999	3,174	1,963	5,780	5,574
Second (2018)	6,897	7,721	7,314	5,280	5,110	3,030	8,789	8,602

Source: SEDAPAL

In addition, the contractor promoted the Environmental and Social Management Plan (ESMP), which spelled out the activities dealing with those areas during construction of the infrastructure work. The ESMP defined several phases: 1) Planning; 2) Promotion, organization, and community participation; 3) Sanitary education; 4) Organization and training; and 5) Evaluation. The first four stages included messages aimed at encouraging sanitary module installations and preparation for the arrival of services. Annex 2 lists all the activities carried out, nine of which included direct references to the sanitary modules installation and/or connectivity to the sewerage network. A Communications Plan was also launched to ensure that information reached out to all potential social actors and main beneficiaries (target population), which was monitored by SEDAPAL during the construction stage.

The two activities with greater community participation were the citizens' assemblies and the sanitary fairs, both of which took place during the "Promotion, organization, and community participation" stage. In these two instances, the narrative revolved around the following messages:

- In order to gain access to all the benefits of home water and sanitation services, a sanitary module is necessary.
- The sanitary module has several benefits, such as:
    - More comfort at home
    - Better living standards (health and self-esteem improvements)
    - Land/property appreciation.
- In order to avoid pipe clogging, home sanitary services must be used properly. Do not throw disposable diapers, sanitary napkins, or any type of trash.

This stage included 138 meetings with a total 12,263 participants. The three sanitary fairs (one for each scheme) attracted the participation of 3,641 people (Figure 4).

Figure 4. Photos of the sanitary fairs held in the three schemes

Sanitary Fair - Cerro Camote

Sanitary Fair - Cajamarquilla

Sanitary Fair - Nievería

Source: SEDAPAL

At the fairs, SEDAPAL and the contractor company provided information on the Project, on the W&S services benefits, the availability of sanitary modules, and the importance of connecting to the network. Also participating were the four financial institutions that offered specific credits for improving the sanitary modules and facilitating connectivity to the network (as we shall see below), as well as 10 companies from the sanitation supplies and/or products areas (producers, hardware stores, etc.).

2. Strengthening connectivity and the availability of adequate bathrooms

During the final stage of infrastructure construction (2018-2019), SEDAPAL supported the work done by the project contractor with a specific consultancy to promote service connectivity. This effort took place between October 2018 and February 2019 –based on terms of reference provided by SEDAPAL itself with technical support from the IDB– and focused on a home by home intervention in the properties that had not yet installed indoor sanitary services[7].

Working together with SEDAPAL and the IDB, the consultancy firm launched a promotion and verification campaign to make sure all homes benefiting from the Project had installed sanitary modules and connected them to the public network. The campaign included promotion materials, home visits, and coordination with SEDAPAL to ensure message consistency and with other stakeholders in the intervention area, such as community leaders and financial entities.

This promotion and connectivity verification campaign was called "Orgulloso/a de mi casa" ("Proud of my home") and lasted four months – from Oct. 28, 2018 through Feb. 25, 2019. This period coincided with the end-of-infrastructure construction phase and its main goals were:

- Verify the state of sanitary modules and connection to the sewerage network of households within the covered area.
- Identify the properties that failed to install sanitary modules and connect to the public network and provide their occupants with information on the characteristics, importance, and benefits of in-house sanitary facilities.
- Ensure that families committed to install sanitary modules within their economic possibilities.

The campaign's main activity was visiting homes in the area of coverage to talk to the families and verify the presence of sanitary modules. This process required training promotion team members in charge of certifying the presence of such facilities and encouraging their installation in the homes that still lacked the appliances; coordinating the field visits by the (19-member) promotion team; conducting field work (a maximum of three visits to each home during the consultancy-reinforcement period); and management of data (results).

The **first visit** (October-December 2018) included all properties within the area of W&S coverage – a total 19,409. Of these, the team managed to gather information from 14,785 homes[8] and certify the presence of sanitary modules (sanitary fittings dossier: Annex 3), which were expected to include at least one toilet and one washbasin with their respective in-house piping ready to connect to the soon-to-arrive public networks. The families that did possess sanitary modules in place and ready for connection were encouraged and reminded that as soon as SEDAPAL finished construction they should connect to the network in order to gain access to the sewerage services. Those lacking modules or full connection fittings, or had them but were not adequate, were informed of the importance of having proper appliances and were offered options for improvement (for example,

7 The consultancy also helped to check and update SEDAPAL's service user database, to register and bring into the system those families that were lagging behind, and to add to the database additional connections not included in the original project design.

8 Those where the interview could be conducted and the verification tab filled out.

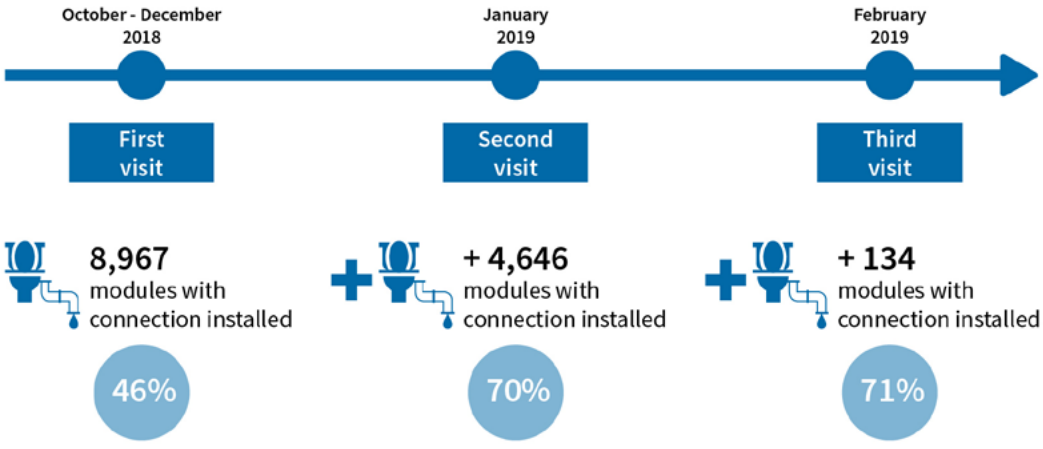
they were presented with information on the different types of sanitary modules available. See Annex 3). One strategy developed by the consultancy firm and SEDAPAL was to provide technical assistance and training so family members could install the appliances themselves with assistance from specialized personnel included in the promotion team. The assistance consisted in providing information and advice for module installation, such as what is the best place in the house and technical tips for construction. In addition, those families that had not installed a sanitary module were asked to make an informal commitment (to their own family and the community) to do it in the near future, within their possibilities and needs. This commitment was written on a home installation verification form and would be later used to make follow-up phone calls. All visited families received general information and material dealing with sanitary education and benefits associated with safe sanitation (Annex 4). The first visit concluded with a list of the properties that still lacked or were in the process of installing sanitary modules and the corresponding connections.

The **second visit** (January 2019) targeted only the households that still did not have a sanitary module or were in the process of installing it, which had been identified during the first visit (8,355 properties). This resulted in a short list of households that either did not have or were in an advanced process of building their sanitary modules.

The **third visit** (February 2019) focused on all the properties that in the second visit showed an advance level of sanitary module construction in order to monitor the building process and connection to the networks, and detect any technical or other type of problems. This included a total of 134 homes visited.

The results of this campaign to promote connectivity are shown in Figure 5. During the first visit it was found that 8,967 properties –46% of the total– already had connection-ready sanitary modules in place that were installed years earlier, during the pre-investment and investment stage, within the framework of the contractor's work and SEDAPAL's sanitary education drive. During the second visit, another 4,646 ready-for-connection sanitary modules were added, taking sewerage connectivity to 70%. Lastly, after the third visit, which included 497 properties, sewer network connectivity rose to 71%, with a total 13,759 sanitary modules ready for connection. Thus, at the beginning of the promotion campaign 5 out of every 10 homes had a sanitary module in place, and by the end of the campaign, in February 2019, the ratio rose to 7 out of 10.

Figure 5. Strengthening connectivity. Door to door visits.



Source: Authors own elaboration

The “Orgulloso/a de mi casa” campaign identified different segments of the population, depending on their need to access W&S services (See Table 2). The role of women at home was crucial, since it is mostly women who are in charge of the home hygiene and sanitation and who tend to stay at home to perform the daily chores of cooking, cleaning, improving the house conditions, etc. Bearing this in mind, some messages were specifically focused on them.

Table 2. Type of public, needs and interests, and main elements of messages

Type of family	Needs/interests	Key message points
Family with boys/girls	Diseases affecting children	Healthy boy/girl and care associated with a good mother
Family with teenage children	How long do your children spend in the bathroom. Teenager children’s friends come visit.	Self-esteem of the teenage boy/girl. Good interpersonal relations.
Large family	How many people are at home and how much time do they need at the sanitary module. Bathroom congestion.	Connection with Independence and privacy. Sanitary module accessibility.
Family with no children	Privacy. Improving the look of your house.	Health. Ease of maintenance.

Source: Communication proposal for campaigns

A total of 14,825 properties were visited as part of the Project. The totality of the properties originally contemplated could not be visited, as some were unoccupied or showed signs of non-permanent or effective occupation. Despite the calls issued to the Governing Boards, some property owners were absent during verification. Notes were left and proprietors were contacted by telephone and new dates were set for the visits. By conducting weekend visits, 15% percent of the properties whose occupants were absent on the first visit were added, although the level of absenteeism on Saturdays and Sundays was similar to that of weekdays. The reasons for absenteeism cited by neighbors and leaders included that the residents left for work very early in the mornings and only returned to sleep; that they only came on weekends; or that they came to check on the property every 15 days. There were also some uninhabited properties whose owners only came to check on them every few months, which thwarted information-collection efforts. Lastly, a small percentage of properties not inhabited on a stable basis but with permanent home connections were found during the plot identification process; yet, when the water and sewer boxes installation process began, new families were found living there – a testament to the high degree of population mobility prevailing in the area of intervention.

Thanks to the combined efforts of the social consultancy and the SEDAPAL team, the “Orgulloso/a de mi casa” campaign led to a 25% increase in total sanitary modules installations over a 4-month period. In addition, 8,414 families signed “commitment to improve” agreements.

3. The financial services role on connectivity and availability of adequate bathrooms

The Water.org NGO has been working at the area of intervention of the Project (Cajamarquilla, Nievería, and Cerro Camote schemes) since June 2015, when it started promoting loans to improve home sanitary conditions with a local financial institution. The potential target areas for those products were those where SEDAPAL had previously conducted awareness campaigns, those where W&S works were about to begin, and those where the infrastructure work was being completed. This collaboration with financial institutions in the area of intervention started to gather steam, with the incorporation of 3 new financial institutions (one in February 2016 and two more in December 2018). Water.org worked with the product chief of each of these institutions, setting up principles and guidelines to manage the home improvement credit initiative, in particular W&S services, through the creation of new financial products or strengthening existing products. At every financial institution, a management assistant was assigned to coordinate and monitor Project actions with the managers of the agencies with which Water.org worked.

December 2018 marked the beginning of the partnership between Water.org, SEDAPAL and the IDB to uphold the sewer network connectivity promotion work under the Cajamarquilla Project, which in previous years was conducted by SEDAPAL through its social teams, the works contractor, and the connectivity reinforcement consultancy, as well as by Water.org through its joint work with financial institutions.

In this occasion, Water.org strengthened its role in the four financial institutions with which it was working in the intervention area in order to increase the amount of information provided door-to-door on the credit options for building and/or improving sanitary modules and connecting to the sewer network that was being built in the area. A key aspect of this period of reinforcement of the work of Water.org with the financial institutions –from December 2018 through July 2019– was hiring a "monitor", whose task was to provide technical advice to agency managers and the financial institutions' credit advisors. For this purpose, a learn-by-doing method was adopted to help credit advisors enrich their traditional client approach tactics and add to their offer specific mentions to the benefits of improving W&S services.

The monitors' tasks were:

- Support the business advisors' field promotion work (door to door, activations, assemblies, use of radio, etc.)
- Coordinate with grassroots organizations: municipalities, associations, utilities.
- Train financial institution's credit advisors in the area of intervention.
- Conduct post-disbursement verification of a sample of clients.
- Monitor assigned agencies' issuances and supply Water.org with a weekly progress report.
- Produce monthly monitoring reports.

The W&S financial products in this Project were part of preexisting loans – typically, credit for improving access to W&S services were part of the products offered for home building and/or refurbishing. These were considered target products if a family used them for a specific purpose (such as W&S service improvement), and were considered byproducts if used for home improvement in general. Annex 5 shows the features of the credit products offered by financial institutions and the requirements to qualify.

The first step was a drive to sensitize and train the financial agencies' staff, starting from the manager of the agency at the area of intervention. Basically, it was determined that if the manager did not focus on the credit product designed specifically for home W&S services, this product would not be made a priority in the agency's sales strategy either. So sensitizing managers was made a top priority. This task was performed by a Water.org team, which organized a workshop also attended by credit advisors. At the same time, throughout the Project's execution, the Water.org monitor provided on-site technical assistance on the water and sanitation product sales. Training included technical financial information on the product, on the potential areas for its promotion (tailor-made for each of the financial institutions), and sensitization and sales strategies, among other issues.

Three main activities were conducted: 1) door-to-door visits, 2) general information campaigns, and 3) information on key subjects.

The **door to door visits** included motivational talks on the benefits of access to credit for W&S purposes. Families were also granted tickets for a draw of a series of products such as tee-shirts, caps, key chains, and other financial institutions' promotional stuff. The drawing event also was used to provide additional information on W&S products to local dwellers.

During the **general information campaign**, a meeting point was set and, through loudspeakers, awards were offered to members of the community willing to participate. Awards handed out to those taking part in activities included home appliances, groceries, baskets, and promotional material. One of the most successful activities included comedy shows with clowns. During these events, community members were provided with information on credit in general and also specifically for W&S services. During the informational session prospective clients were identified and listed for later approach.

Lastly, **key points for information** were chosen in the area of intervention, typically in crowded settings such as market places, restaurants, bookstores, etc. The financial institutions advisors handed out flyers containing information on credit products, including requirements to qualify and credit advisors' contact information.

The financial institutions resorted to a variety of information means to sponsor their products, including printed material such as flyers (see Annex 6). The messages also promoted proper care of water and sanitation services, wellbeing, privacy, comfort, social status, health, hygiene, and family progress. Other promotional materials provided by the financial institutions included pens, caps, key rings, etc.

During the intensive promotion stage –between December 2018 and June 2019–, which included the help of a monitor, 1,203 credits were granted, most of them for home improvement, including construction of sanitary facilities and connection to the network (see Annex 5 for characteristics). The credit advisors paid home visits to ensure the effective use of the loans. No specific financial product was created for this Project because there already were on the market products for home construction and reforms (CrediHogar, Construyendo Confianza, Caja Construye), as well as others specifically designed for sanitation purposes (Crediagua, Aguamás, CrediYaku), which were promoted among the population. After round-the clock service was made fully available to users, the financial entities continued to grant credits, with a significant spike in December 2019 (564 loans) and January 2020 (555 loans). This pattern of users' behavior matched previous SEDAPAL experiences in other projects, where the number of connections shot up dramatically after the service became fully operational.

Table 3. Financial institutions' credit placements in in the area of intervention

	Apr. 2016 – Nov. 2018 Water.org promotion	Dec. 2018 – Jun. 2019 Intensive promotion	Jul. 2019 – Mar. 2020 Water.org post-promotion	Total
W&S credits	3,645	1,203	2,065	6,913

Source: Water.org monitoring system for all financial entities

As previously mentioned, of the total number of beneficiary properties on the register, 71% had installed sanitary modules by February 2019. Of these, 25% (4,848 homes) sought credit, with the rest either using their own resources, taking family or informal loans, etc.

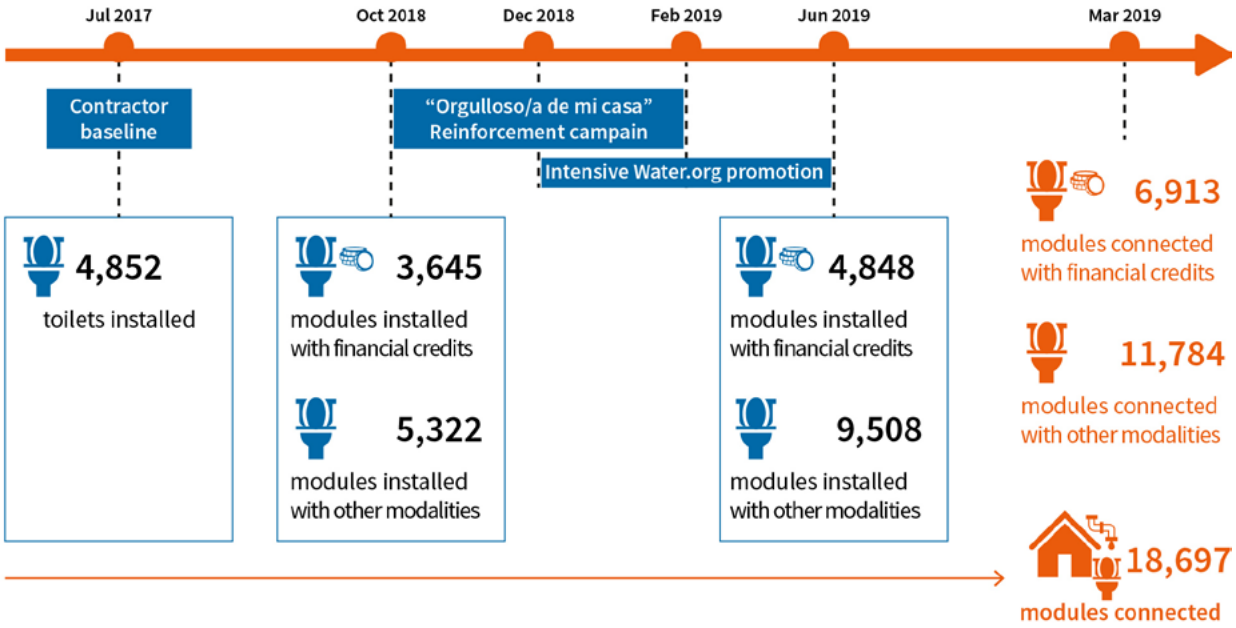
4. Current situation

As of March 2020, according to SEDAPAL's commercial system data, there were a total 18,697 home connections to the network in the program's intervention area, or 98% of all households[9]. This was a significantly higher rate than that of other SEDAPAL programs, which reached rates of around 50% of connectivity to water and sanitation systems at the beginning of the operation, with slow increases in the following months. The Cajamarquilla values are testament to the success of this SEDAPAL project and the result of the joint effort by multiple actors on the field who, resorting to a variety of tools, instruments, and initiatives, managed to promote sanitary modules installation and their connection to the network.

The following figure shows the evolution of connectivity throughout the process. During the executing stage, from November 2011 through December 2019, the program's beneficiary households, encouraged by promotion campaigns launched in the area of intervention, installed sanitary modules. The drinking water and sewage service contract signed with SEDAPAL required families to build the connections to the network, which reached the 98% mark in March 2020.

9 In addition, there are 10,000 lots for residential purposes in the area that could benefit from the adjacent sewerage network and whose number could vary dramatically due to the fast-changing dynamics of the property market and buyers' tendency to merge plots of land.

Figure 6. Cajamarquilla Project connectivity



Source: authors own elaboration

LESSONS LEARNED

SOURCE: **CONACCIÓN**

IV. LESSONS LEARNED

The lessons learned from the connection of households to the public water and sewerage systems throughout the Project include institutional, social, communicational, and technical aspects, among others. The most relevant lessons were the following:

WITH REGARD TO THE DEVELOPMENT OF THE CONNECTIVITY STRATEGY

- **SEDAPAL made the existence of a home sanitary system ready for connecting to the sewerage network a requisite for providing drinking water services.** One of its main strategies for attaining such high sewer connectivity rates in the Project intervention area was tying it to the home drinking water supply. This approach broke with the population's tendency to place more value on drinking water services than on connecting to the sewerage system, which typically resulted in the latter getting lower connectivity rates.
- **The promotion component for connecting to the W&S systems (which included the installation of sanitary modules and the connection to the public sewage network) should be upheld at every step of the Project.** The Cajamarquilla Project did include the connectivity promotion component from both the pre-investment and investment stages. In both cases, this component was made part of the bidding forms, which paid off handsomely by letting SEDAPAL to monitor progress.
- **Sanitary modules installation promotion works better when infrastructure construction has reached a more advanced stage.** The points in time when the most sanitary modules are installed are during trench excavation, followed by pipeline installation, the placement of sewage boxes for each household, meters installation, and performance tests for both systems.
- **Connectivity should be promoted with a clearly established date for the commencement of the water and sanitation services.** Having a works timetable and sharing key dates and project highlights with the population is of the essence. While not all delays are the responsibility of the utility company, it is indeed its responsibility to keep the population informed. Transparent and clear messages explaining for example the cause of the delays or changes in the project, the solutions to be implemented, etc., are paramount to the company's image and credibility. In this sense, the biggest challenge is early identification of the risks and adoption of efficient mitigation action.
- **In order to attain high levels of connectivity to the sewerage network, it is necessary to have different strategies for sanitation modules installation.** Families use a variety of methods to pay for them, from using their own savings to taking up loans. In this particular instance, 45.7% of the households used savings, family loans, or credit from the hardware store or other construction-related businesses, whereas 25.1% sought lending from microfinancing institutions to install sanitation modules and connect them to the sewage network.

- **While in most cases families resort to self-construction[10] of the sanitary modules, they place high value on specialized technical advice to ensure proper connectivity to the network.** And although there is a dynamic market of builders and fitters in the areas of intervention, families tend not to use their services, either because of cultural issues (e.g., habits), lack of knowledge (service price-quality relationship, long-term benefits, etc.), or economic considerations (too costly for families long attached to the Peruvian habit of building their own houses and installations). Providing information, technical assistance, and/or training on construction by specialized personnel as part of the promotion process can improve the quality of the family-built installation and help beneficiaries set aside any doubts they may have entertained on the Project.
- **Financial products associated to W&S service improvements and connectivity to the network are made part of the home-refurbishing loans.** The financial institutions' potential clients associate sanitary installation improvements with general home improvements, so the financial products that are developed could be part of a series of products linked to home construction or refurbishing.
- **There are several barriers to the adoption of W&S services by way of credit, and these should be taken into consideration during the promotion stage.** The most frequent obstacles have to do with access to information and with household conditions. Knowledge barriers include lack of familiarity with the benefits of connectivity in terms of health and wellbeing, as well as with the lack of acquaintance with credit issues (which may fuel fears of property foreclosure, qualms about credit provisions and payment terms, etc.). With regard to home-related barriers, they refer to potential access problems such as lack of space for the installation of sanitary modules, insufficient knowledgeability to make right decisions, etc.
- **Sensitizing the families who move into a property after the network was connected in the area but who still lack an in-house sanitation module is critical.** This is a group from which demand for the service is expected. These families will not just sign in as clients but also install their sanitary modules and ensure their connectivity to the network. At the Project intervention area, the post-construction sensitizing task is performed by the local utility, which needs to have the necessary staff and budget to target this group and to reinforce messages associated with hygiene, adequate use of installations, and payment for the service among the whole population.

WITH REGARD TO THE KEY MESSAGES ASSOCIATED WITH CONNECTIVITY

- **Boosting connectivity demands multiple messages to reach out to the different sectors of the population in the area of intervention.** A single-message approach does not allow for adapting information to the different characteristics of the targeted population. For this reason, the Project has devised a number of different narratives, linking the benefits of the in-house connection to economic improvement, better quality of living, or the property value, for example. However, the final goal needs to be clear and shared by all messages and narratives: an increase in the number of connections to the drinking water and sewage systems. This objective needs to be shared by all population sensitizing campaign actors,

10 I.e., the one undertaken directly by the family and entrusted to a home-improvement expert, typically a relative or a family acquaintance. This is a common practice in the communities, and one closely related to their sense of belonging and responsibility of the working family.

which requires their training and sharing with them materials and messages they need to approach the population.

- **The sensitizing messages need to adapt to the different target audiences, including intervention-area schools.** The supply of information at schools has proved to be a useful tool and one that complements the work with the families (through door to door visits, fairs, assemblies, etc.) to incentivize connectivity and the suitability of the home sanitation services, with boys and girls acting as messengers of the changes of habits that are necessary to improve sanitary conditions at their homes (e.g., use of the water resource, proper care of the services, health benefits, etc.).
- **The message during both pre-investment and investment (infrastructure construction) stages should focus on the installation of the sanitary modules in order to be ready for the arrival of the drinking water and sanitation services.** It is important to stress that the connection to the networks should not be performed during the system construction in order to avoid maintenance problems such as presence of dirt, clogging, etc.
- **The central message was to inform families/clients that it is their responsibility to install the sanitary module before the water service arrives to the home.** Surveys have shown that this was the most remembered message by Project beneficiaries. Community leaders structured all their different strategies around one central idea: the families/clients responsibility to install their home sanitary facilities before the arrival of the water service. This message mobilized community members to ensure that the whole neighborhood had an adequate home sanitary module installed and ready for network connection.
- **It is crucial to include some change-inspiring elements in the sensitizing messages.** These elements, which played a crucial motivational role among families, revolved around a gender approach (to encourage women's participation), and avoided sexist (such as the role of women at home) and otherwise discriminatory messages, while including emotional components, mostly dealing with the wellbeing of users themselves, their children, and their families in general.

WITH REGARD TO THE ROLE OF KEY ACTORS

- **Clear guidelines should be applied to coordinate all key actors participating in the connectivity strategy implementation.** These guidelines should be headed by the utility firm providing the W&S services, which should coordinate with the public and private sectors the main messages to be disseminated and the strategy implementation structure (who, when, what messages). It is crucial to define the coordination mechanisms between all actors involved in the connectivity strategy (the utility, community leaders, the Project beneficiaries, the financial institutions, the hardware and plumbing services, sectoral NGOs operating in the intervention area, etc.), as well as the common goals and strategies (planning, scalability, timetables, etc.) in a flexible way and adapting to the resources, range, and capabilities of each of the principal stakeholders.
- **It is also vital to give full credit to community leaders, who play a central role in the efforts to induce the population to connect to the public network.** Recognition of their protagonism in the areas of information, sensitization, and promotion has been a key factor behind the high rates of W&S modules installation at homes before the utility started

providing the services. Local leaders' strategies included: hammering out agreements at assemblies or through common pledges to ensure that all families would have connection-ready installations, sending module installation reminders attached to the letters sent by contractors, home visits, leading by example by fitting the W&S modules at their own homes, and helping out those families that for whatever reason had not managed to purchase a basic module, among others.

- **Service utilities also have a central role to play in helping bridge the W&S connectivity gap, particularly in the most vulnerable sectors of the population.** The information they have on those connected to its services and on potential W&S beneficiaries allows them to focus their promotion activities among the disadvantaged sectors using a multiplicity of communication strategies and incentives (door to door visits, sensitization campaigns at schools, work with community leaders, fairs, joint work with the private sector to foster investments for the improvement of household sanitary conditions, etc.).
- **Improving W&S services offers financial institutions operating in the area of intervention a chance to have recurring clients.** Experience has demonstrated that the population taking up small credits for connectivity or purchase of materials tends to become recurrent clients who use the money for further, gradual home improvements. According to data provided by financial institutions, about 70% of the clients taking up loans for W&S purposes later seek further credit to continue improving their homes. Higher connectivity rates mean better quality of living for service beneficiaries and also an increase in the number of clients for the utilities, which in turn can use the extra revenues to improve and expand their service to new customers, further boosting their operational revenues.
- **In order to lock in a new client, financial institutions need to invest in improving their promotion strategies by training their credit advisors.** Enhancing their client base and retaining existing customers requires training the credit advisors in a number of different areas: home visits (a task not required to gain business clients) and the use of technology and tailor-made planning tools; new ways to approach the client, with key messages focused on the W&S sector and on habit changes; including emotional-motivational messages about caring for the clients and their families; coordinating with other actors to potentiate the promotional drive, etc.

CONCLUSIONS

SOURCE: **CONACCIÓN**

V. CONCLUSIONS

In order to ensure a high rate of connectivity to the water and sewer networks, it is necessary to implement a promotion strategy and a variety of connection systems during the Project's lifetime.

The Cajamarquilla Project experience has confirmed that the joint work approach adopted by SEDAPAL, Water.org, community leaders, and the financial institutions in the area of intervention was a major success, which was reflected in the high levels of connectivity following the construction period (investment stage).

In particular, during Project execution, the keys for success were associated to: (i) the development of promotion strategies during the pre-investment phase and the investment made by the contractor and monitored by the service provider; (ii) a permanent dialog between service provider, contractor, and community leaders, who in turn acted as links with the beneficiaries, explaining to them the importance of connecting their homes to the network; and (iii) counting on financial tools through microfinancing institutions located in the area of intervention in order to reach out to a segment of the population that lacked the monetary resources to make all the sanitary installation work in their homes required to connect to the sanitation system.

The multidisciplinary work for implementing the connectivity strategy is crucial to cover all the different needs of the population at the time of improving their home sanitary services and connect to the public network.

In other words, a sensitizing drive launched by the service provider with help from local leaders can be complemented with work conducted by social organizations (NGOs, foundations, etc.) and by financial entities that are active in the intervention area. The social organizations can either interact directly with the population, providing information on the benefits of connecting to the network (health, productivity, social status) or with the financial institution so they can offer better alternatives for home-improvement oriented credit. In this sense, coordination and planning among actors and harmonized communication under the leadership of the service provider are paramount. Service providers' investment in community habit-change activities to encourage the fitting of adequate sanitary installations and connectivity to the network not only translates into better living conditions for their clients, but also significantly boosts their operational revenues, which in turn allows them to provide better services.

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ANNEXES

SOURCE: **WATER.ORG**

ANNEXES

Annex 1. SEDAPAL material during pre-investment and investment

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CONSORCIO SANEAMIENTO CAJAMARQUILLA

¿Qué trabajos deben realizar los pobladores en sus habilitaciones?

Existen habilitaciones cuyas viviendas se encuentran en zonas de difícil acceso y en algunos casos por su ubicación no tienen salida para el alcantarillado. Es por ello que para acceder a las conexiones domiciliarias, los titulares o posesionarios de estos lotes deben realizar los siguientes trabajos:

- Acondicionamiento del terreno de sus viviendas
- Nivelación de las calles.
- Muros de contención.
- Liberación de obstáculos como tanques, silos o jardines que puedan obstruir las vías donde se realizarán los trabajos de obra.

El Equipo de Intervención Social realiza las coordinaciones con la población y con los dirigentes antes de ejecutar las actividades en las habilitaciones.

"Contribuimos a mejorar la calidad de vida de la población"

Para mayor información:
Consorcio Saneamiento Cajamarquilla - Oficina de Intervención Social
Dirección: Calle Lima Mz. A Lote 4, Asociación Julio C. Tello - Anexo 8 (Cerro Camote)
Teléfonos: (01) 497-5882
Horario de atención: Lunes a Viernes de 9:00 a.m. a 5:00 p.m.
Sábados de 9:00 a.m. a 12:00 m.

PERÚ Ministerio de Vivienda, Construcción y Saneamiento

sedapal

CONSORCIO SANEAMIENTO CAJAMARQUILLA

Esquema Cajamarquilla, Nievería y Cerro Camote

Ampliación y Mejoramiento de los Sistemas de Agua Potable y Alcantarillado de los Sectores 129, 130, 131, 132, 133, 134 y 135 Distrito de Lurigancho y San Antonio de Huarochirí

PERÚ Ministerio de Vivienda, Construcción y Saneamiento

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¿Qué obras ejecutará el proyecto ampliación mejoramiento de los sistemas de agua potable y alcantarillado del Esquema Cajamarquilla, Nievería y Cerro Camote?

El proyecto ejecutará las siguientes obras:

- Construcción de 17 reservorios.
- Instalación de nuevas redes de agua potable y alcantarillado.
- Mejoramiento de las redes de agua potable y alcantarillado existentes.
- Instalación de aproximadamente 14,536 conexiones domiciliarias de agua potable y alcantarillado.

El plazo para la ejecución de las obras es de 660 días y cuenta con un presupuesto de US$ 167'182,000.43 beneficiando a una población de 71,420 habitantes.

El proyecto comprende trabajos de ampliación y mejoramiento tales como obras generales, redes secundarias, conexiones domiciliarias, así como la rehabilitación de las redes existentes.

¿Qué empresa está realizando la ejecución de las obras?

Las obras son ejecutadas por SEDAPAL a través de la empresa contratista Consorcio Saneamiento Cajamarquilla. Los trabajos se iniciaron, de acuerdo al plazo contractual, el 18 de agosto de 2016 y culminarán el 17 de Agosto de 2018 y cuentan con el financiamiento del Banco Interamericano de Desarrollo (BID).

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¿Quién realizará la firma de contratos para acceder a los servicios?

La firma de los contratos será realizada por SEDAPAL y se efectuará en las habilitaciones beneficiarias que no cuentan con los servicios de agua potable y alcantarillado dentro del Esquema Cajamarquilla, Nievería y Cerro Camote.

¿Cuáles son los requisitos para acceder a los servicios?

- Que el titular o posesionario haga vivienda efectiva en su domicilio.
- Asistir a los talleres o reuniones que realizará el Consorcio Saneamiento Cajamarquilla.
- Instalar los aparatos sanitarios en las viviendas para ser conectados a los servicios.
- Generar un clima de paz social, confianza y seguridad para los trabajadores de la obra.

La documentación a presentar en original y copia es la siguiente:

Documento Nacional de Identidad (DNI) que se encuentre vigente. Si el DNI del titular o posesionario está por caducar debe acudir a la RENIEC para renovarlo.

Documento de propiedad o posesión del lote: Título de propiedad (COFOPRI) Constancia de Posesión (Municipalidad de Lurigancho Chosica San Antonio de Huarochirí) o documentos de propiedad reconocidos por Registros Públicos (SUNARP).

Si el(la) titular del lote se encuentra fuera de Lima o en el extranjero, debe utilizar una carta poder notarial para firmar su contrato de prestación de servicios. Es necesario que los titulares y posesionarios de lote tengan instalados como mínimo los siguientes aparatos sanitarios:

Inodoro | Lavadero de tranca | Ducha | Lavadero de Baños

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CONSORCIO SANEAMIENTO CAJAMARQUILLA

¿Qué documentos se suscriben en la Firma de Contratos?

El poblador beneficiario deberá suscribir los siguientes documentos:

1. Contrato de prestación de servicios.- Por el cual la empresa presta los servicios de saneamiento al solicitante, quien adquiere la calidad de titular de la conexión domiciliaria y debe pagar la contraprestación correspondiente por dichos servicios.

2. Compromiso de ejecución de obra reconocimiento de deuda y facilidades de pago.- Establece los términos y condiciones en que se ejecutan las obras de redes secundarias y conexiones domiciliarias así como el reconocimiento de la deuda del cliente. El pago de la conexión deberá efectuarse al crédito ya sea a una o mas cuotas.

3. Compromiso de instalación de punto de agua al interior del lote.- Documento suscrito por el futuro beneficiario asumiendo la responsabilidad de instalar, como mínimo, un punto de agua al interior del lote para la prestación del servicio.

4. Declaración jurada para el acceso a los servicios.- En este documento el titular asume toda responsabilidad por la instalación de la conexión domiciliaria en su predio. Esta declaración jurada no acredita al posesionario de lote como propietario(a) ni se constituye como un medio probatorio para lograr la titularidad de la propiedad.

La instalación de módulo sanitario, la vivencia efectiva en los lotes y el acondicionamiento de calles y lotes son parte de los compromisos para poder acceder a los servicios de agua potable y alcantarillado.

Para mayor información:

Consorcio Saneamiento Cajamarquilla - Oficina de Intervención Social
Dirección: Calle Lima M.2. A Lote 4, Asociación Julio C. Tello - Anexo 8 (Cerro Camote)
Teléfonos: (01) 491-5882
Horario de atención: Lunes a Viernes de 9:00 a.m. a 5:00 p.m.
Sábados de 9:00 a.m. a 12:00 m.

PERU Ministerio de Vivienda, Construcción y Saneamiento

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CONSORCIO SANEAMIENTO CAJAMARQUILLA

Reconocimiento de deuda y facilidades de pago

Firma del contrato para los servicios de agua potable y alcantarillado

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¿Qué es la Firma de Contratos para los servicios de agua potable y alcantarillado?

Es la actividad en la cual **los pobladores que están en el padrón de beneficiarios de habilitación firmarán el contrato con Sedapal para acceder a los servicios de agua potable y alcantarillado.** Luego de la firma de contratos se procederá con la instalación de las conexiones de agua potable y alcantarillado en cada habilitación.

En la firma de contratos, **los pobladores beneficiarios podrán escoger la modalidad de financiamiento para cancelar el costo de sus conexiones domiciliarias de agua potable y alcantarillado. La actividad será realizada por SEDAPAL, en coordinación con el Consorcio Saneamiento Cajamarquilla,** contratista que está ejecutando las obras de ampliación y mejoramiento en el esquema Cajamarquilla, Nievería y Cerro Camote.

¿Cuál es el costo de las conexiones domiciliarias de agua potable y alcantarillado?

El costo de las conexiones domiciliarias de agua potable y alcantarillado es el siguiente:

Costo de las conexiones domiciliarias de agua potable y alcantarillado

Concepto	Costo	I.G.V.	Total
Conexión domiciliaria de agua potable	S/.469.92	S/. 84.99	S/.554.91
Conexión domiciliaria de alcantarillado	S/.688.16	S/.123.97	S/.812.06
Total	S/.1,158.11	S/.208.46	S/.1,366.57

Planes de financiamiento

Cuotas	Años	Importe
12	1	S/. 120.38
24	2	S/. 69.32
36	3	S/. 44.33
48	4	S/. 34.67
60	5	S/. 29.21
72	6	S/. 25.46
84	7	S/. 22.80
96	8	S/. 20.82
108	9	S/. 19.29
120	10	S/. 18.07

Tasa de interés anual: 8.73%

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Documentos que se deben presentar para la firma de contratos

En esta primera etapa del proyecto, firmarán el contrato para los servicios de agua potable y alcantarillado los pobladores que figuran en el padrón de beneficiarios elaborado durante el Estudio Definitivo que se realizó en los años 2013 y 2014.

1.- Si el poblador figura en el padrón y cuenta con título de propiedad de COFOPRI, documentos de Registros Públicos, compra venta notarial o minuta, debe presentar el original y copia de estos documentos más su DNI para poder firmar su contrato.

2.- En caso que el poblador figure en el padrón y no cuente con estos documentos, debe acercarse al local de firma de contratos presentando su DNI. **Si el poblador beneficiario se encuentra fuera de Lima o en el extranjero, puede hacer uso de una carta poder notarial para firmar su contrato de prestación de servicios.**

Información importante para la Firma de Contratos:

Para que el poblador beneficiario firme su contrato para los servicios de agua potable y alcantarillado debe tomar en cuenta lo siguiente:

- Hacer **vivencia efectiva en su domicilio.**
- **Asistir a los talleres o reuniones informativas** que viene realizando el Consorcio Saneamiento Cajamarquilla en las habilitaciones beneficiadas del proyecto.
- **Instalar los aparatos sanitarios en las viviendas** para ser conectados a los servicios.
- **Asistir colaborar para generar un clima de paz social, confianza y seguridad** para los equipos que trabajarán en cada habilitación.

El módulo sanitario consta de un inodoro, lavadero de manos, una ducha y el lavadero de usos múltiples.


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Ministerio de Vivienda, Construcción y Saneamiento
Esquema Cajamarquilla, Nievería y Cerro Camote
Ampliación y Mejoramiento de los Sistemas de Agua Potable y Alcantarillado de los sectores 129, 130, 131, 132, 133, 134 y 135 de los distritos de Lurigancho y San Antonio de Huarochirí.
Gran Feria Sanitaria
¡Bienvenidos!
Consorcio Saneamiento Cajamarquilla


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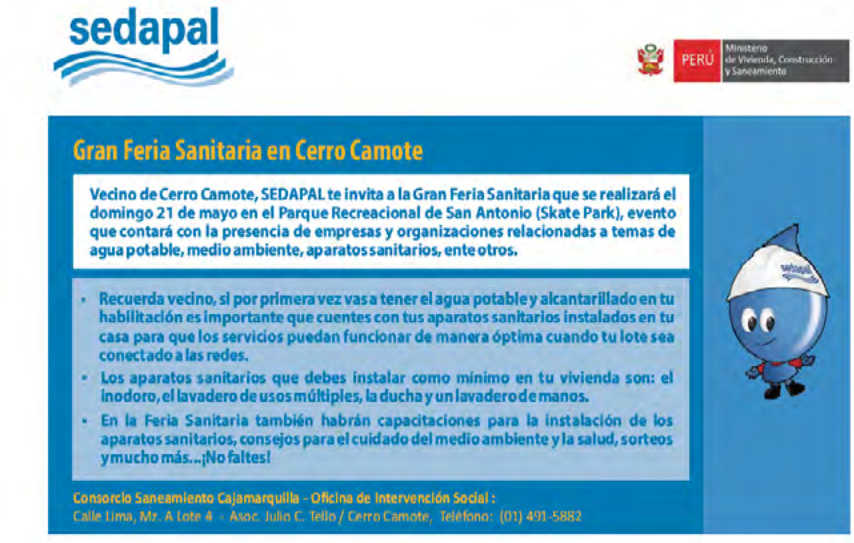
Ministerio de Vivienda, Construcción y Saneamiento
Esquema Cajamarquilla, Nievería y Cerro Camote, Ampliación de los Sistemas de Agua Potable Y Alcantarillado de los Sectores 129, 130, 131, 132, 133, 134 y 135 Distrito de Lurigancho y San Antonio de Huarochirí
GRAN FERIA SANITARIA
Domingo 21 de Mayo
Parque Recreacional San Antonio
(Skate Park)
Altura de la Municipalidad de San Antonio
Hora: de 10:00 a.m. a 4:00 p.m.
Consorcio Saneamiento Cajamarquilla - Oficina de Intervención Social :
Calle Lima Mz. A Lote 4 - Asoc. Julio C. Tello / Cerro Camote, Teléfono: (01) 4915882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Gran Feria Sanitaria en Cerro Camote
Vecino de Cerro Camote, SEDAPAL te invita a la Gran Feria Sanitaria que se realizará el domingo 21 de mayo en el Parque Recreacional de San Antonio (Skate Park), evento que contará con la presencia de empresas y organizaciones relacionadas a temas de agua potable, medio ambiente, aparatos sanitarios, ente otros.
• Recuerda vecino, si por primera vez vas a tener el agua potable y alcantarillado en tu habilitación es importante que cuentes con tus aparatos sanitarios instalados en tu casa para que los servicios puedan funcionar de manera óptima cuando tu lote sea conectado a las redes.
• Los aparatos sanitarios que debes instalar como mínimo en tu vivienda son: el inodoro, el lavadero de usos múltiples, la ducha y un lavadero de manos.
• En la Feria Sanitaria también habrán capacitaciones para la instalación de los aparatos sanitarios, consejos para el cuidado del medio ambiente y la salud, sorteos y mucho más...¡No faltes!
Consorcio Saneamiento Cajamarquilla - Oficina de Intervención Social :
Calle Lima, Mz. A Lote 4 - Asoc. Julio C. Tello / Cerro Camote, Teléfono: (01) 491-5882

Annex 2. Activities conducted by the ESMP to promoted sanitary modules and connectivity

STAGE	SPECIFIC ACTIVITIES
PLANNING	Multidisciplinary team creation
	Certification of eligibility authorization
	Work plan implementation
	General diagnosis of the Cajamarquilla Project
	Meeting to present EIS to EPS-SEDAPAL, leaders and actors by Scheme
	Communication plan
	Population and actors get to know the Cajamarquilla Project and its infrastructure works
	Contingency plans
	Construction support plan
	Photographic and video records of the Cajamarquilla Project's area of influence before construction is executed
COMMUNITY PROMOTION, ORGANIZATION AND PARTICIPATION	Coordination actions and informative meetings to encourage the participation of citizen assembly/ authorization leaders
	Beneficiaries register's updating and improvement
	Entry baseline (by sampling)
	Social actors and local authorities participating in technical observations and/or urban authorization issues' data gathering
	Beneficiaries are informed of the possible impacts of the works and of mitigation actions
	Population is informed and sensitized about in-house installations (sanitary fair)
	Preparation and presentation of sanitary education awareness-raising and informational material
SANITARY EDUCATION	Participative planning meetings to organize training activities
	Information campaign on contract-signing requirements
	Sanitary education workshops
	Training of plots of land owners and/or occupants
	Verification of new users' home connections and meters
ORGANIZATION AND TRAINING	The EIS will conduct training workshops on house connections and sanitary installations, saving modules, hygiene, health practices, and adequate use of services
EVALUATION	Monitoring and evaluation of implemented water and sewerage systems
	List and mapping of the Cajamarquilla Project's beneficiary and non-beneficiary authorizations
	Formal agreements signed by authorizing officials
	Final report

Source: SPT -SEDAPAL – Final Evaluation Report – Report 3. May, 2019

Annex 3. Types of sanitary modules (reinforcement consultancy 2019-2020)

MODULE NUMBER	COMPONENTES					GRAPHIC
	TOILET	WATER POINT	WASH BASIN	SHOWER	KITCHEN SINK	
MODULE 1	X	X				
MODULE 2	X	X	X			
MODULE 3	X	X	X	X		
MODULE 4	X	X	X	X	X	

Source: CONACCIÓN – PRISMA consultancy

Annex 4. Specific activities associated with the Project and SEDAPAL's sanitary module installations (investment stage)

VISIT	PUBLIC	MESSAGES	MATERIAL
FIRST AND THIRD VISITS	Wives, husbands, and female heads of households.	Now we're finally proud of having the home of our dreams. Having an installed bathroom will improve the living standards of our family, including our personal hygiene, and there will be no more flies and bad smell.	 Six-months calendar
		Having the bathroom I always dreamt with is just wonderful! Having sanitation services at home is definitely a major benefit.	 Poster
SECOND AND THIRD VISITS	Male heads of household and their grown-up children.	Having a bathroom at home will make our friends comfortable and us proud. I'll keep my part of the deal now: I'll look for options for installing my home bathroom.	 Six-months calendar
ALL VISITS		Rational use of water linked to savings. "My economy will improve and I will not have to pay for bottled water or have to carry it up the hill." Drainage maintenance linked to responsibility, and investment linked to better life quality. "A sanitary module is not a cost – it is an investment that improves our living standards."	 

Source: Report 4. CONACCION – PRISMA consortium. "Technical and Social Assistance for the Promotion, Verification, and Installation of In-House Connections at the Project's Beneficiary Families (properties)" consultancy service. January 2019.

Annex 5. Characteristics of the financial institutions' credit products and requirements

PRODUCT	SUB PRODUCT/ DESTINY	W&S CREDIT REPORTS AS FROM
Home construction (Micasa/Milocal) Focusing on male and female micro- and small-sized entrepreneurs and self-employed workers involved in home construction and/or improvement, as well as on the acquisition of land plots, houses, apartments, etc.	"CrediAgua"	April 2016
Credihogar. Loans for home building, expansion, refurbishing, repair, connection services, and for the purchase of lots of land for home or business construction purposes.	"CrediYaku"	April 2017
Construyendo Confianza. Credit for salaried or self-employed natural persons seeking to expand or refurbish their homes.	"Vive Mejor"	December 2018
Caja Construye Credit for building, expanding, roofing, or otherwise refurbishing your house or business premises with better terms and conditions than those prevailing in the market.	"Agua Más"	December 2018

Source: Water.org

Basic requirements for credit access:

- Having either individual or family-based demonstrable income from a salary or self-employment source. Proof of income may be provided by tax returns, recent receipts of merchandise purchase, sales book, fees receipts, pay slip, etc.
- Those owning their own business need to prove it is in operation by producing buy or sell tickets, tax records, operating permits, business revenue and spending register, etc.
- Showing the deed, right to use, purchase document, declaration of inheritance, etc. of the lot where they plan to build.
- Proving they are free from overdue debts in the financial-system. Payment slips and/or ongoing debt payment schedules can be used as evidence.
- Demonstrating a solid track record in dealings with the financial-system.

REQUESTED DOCUMENTS: All financial entities require presentation of an ID, proof of income, property deed, service invoices showing a home address, and a budget for materials and labor. All financial institutions reserve the right to request more information and/or documents depending on the risk-assessment results.

CREDIT CONDITIONS: All products are either a byproduct or a target product. Credit conditions vary depending on the type of credit, therefore this list comprises those financial products that are most frequently used by the financial entities. The main features of the four entities' conditions for credit are.

- All loans are granted to natural persons and denominated in Peruvian soles.
- The Annual Effective Rate is used to determine the interest rate over a one-year period. Annual effective rates range from 14.98% to 79.59%. The rate for each individual client will depend on their credit assessment and risk profile.

- Minimum amounts go from S/.300 to S/.1,000, and maximum amounts from s/10,000 to s/50,000.
- Credits are repaid in monthly installments, with the exception of Caja Arequipa, which negotiates the payment frequency with each client.
- The clients' age must range from 18 or 21 minimum and 75 years old maximum.

Annex 6. Financial institutions' communication materials

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<tr><td>Benefits of water and sanitation services</td><td>Practical tips for the care of water and sanitation services</td></tr>
<tr><td> 
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<tr><td colspan="2">Informative leaflets</td></tr>
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<tr><td colspan="2">Promotional keyrings</td></tr>
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IDB
Inter-American
Development Bank


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water.org