MAGENTA
choose *better*

SEWAGE NETWORK CONNECTIVITY IN FERNANDO DE LA MORA

A BEHAVIORAL DIAGNOSIS

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Abstract

Access to piped sewage in Latin America and the Caribbean is on the rise, but the challenge of increasing household connection to the sewage system remains. Despite these efforts, the connection rate is still sub-optimal. This paper aims to analyze the factors that influence the citizens of Fernando de la Mora, Paraguay in their decision to connect to the sewage system. The study employed a mixed-methods approach, utilizing both qualitative and secondary data sources, with a focus on the COM-B (Capability, Opportunity, Motivation = Behavior) model. The results of the study reveal that several barriers impede citizens from connecting to the sewage system, including limited knowledge and awareness, difficulties in the connection process, lack of economic resources, and a lack of trust in service providers. The most significant barrier found was the high cost of connectivity. Despite these barriers, the study highlights that participants are aware of the potential benefits of connecting to the sewage system, including convenience, long-term financial savings, improved air quality, and health and environmental benefits. To address these barriers, the report provides several recommendations, including community outreach programs to increase knowledge and awareness, cost-awareness campaigns to reduce the financial burden, simplifying the connection process to reduce hassle factors, the creation of rapid and small rewards to incentivize connection, and the implementation of demonstration projects to build trust in service providers. In conclusion, the report provides valuable insights into the key behavioral barriers and drivers affecting citizens in Fernando de la Mora's connection to the sewage system and outlines practical strategies to address these barriers and promote connection.

Introduction

Background

As stated by the IDB in "The Last Mile Challenge of Sewage Services in Latin America and the Caribbean," access to piped sewage in Latin America and the Caribbean cities has been on the rise in recent decades. However, governmental efforts to build the infrastructure and provide this service to their citizens are encountering an unexpected obstacle: households are not choosing to connect to the sewage system,[1] In Paraguay, only 15.04% of the population has access to sewage systems. The rest of the population uses alternative sanitation solutions, such as pit latrines and cesspools, many of which affect the environment due to poor construction and maintenance.

Access to sewage networks is important to development as it reduces disease risks, the prevalence of water transmissive disease, and increases hygiene.

To increase access to sewage systems in the Asunción Metropolitan Area (AMA), the Government of Paraguay, through the Empresa de Servicios de Paraguay (ESSAP) has been implementing and preparing various projects that are expected to increase the coverage of sewerage services and wastewater treatment to more than 50% of the population of the AMA. However, the connectivity rates are sub-optimal despite attempts to remove the main barriers to connection.

This study is a behavioral diagnosis to identify the barriers and drivers that determine the connection to sanitation services in Fernando de la Mora. The study was conducted through primarily qualitative methods, informed by primary and secondary sources: a desk review of existing literature, audit of outreach methods, in-depth interviews with owners of both connected and not connected households in Fernando de la Mora, and key informant interviews with relevant stakeholders for the project.

1. IDB, (2020).

Methodology

COM-B

COM-B is used as analytical framework for this diagnosis. The COM-B Model[2] is a framework designed to gather information on the factors determining whether a person engages in a particular behavior. The acronym argues a mathematical function: Capability + Opportunity + Motivation = Behavior. The Model considers whether a person has the knowledge, skills, and abilities (capability); external chances (opportunities); and psychological enthusiasm (motivation) for doing a behavior.

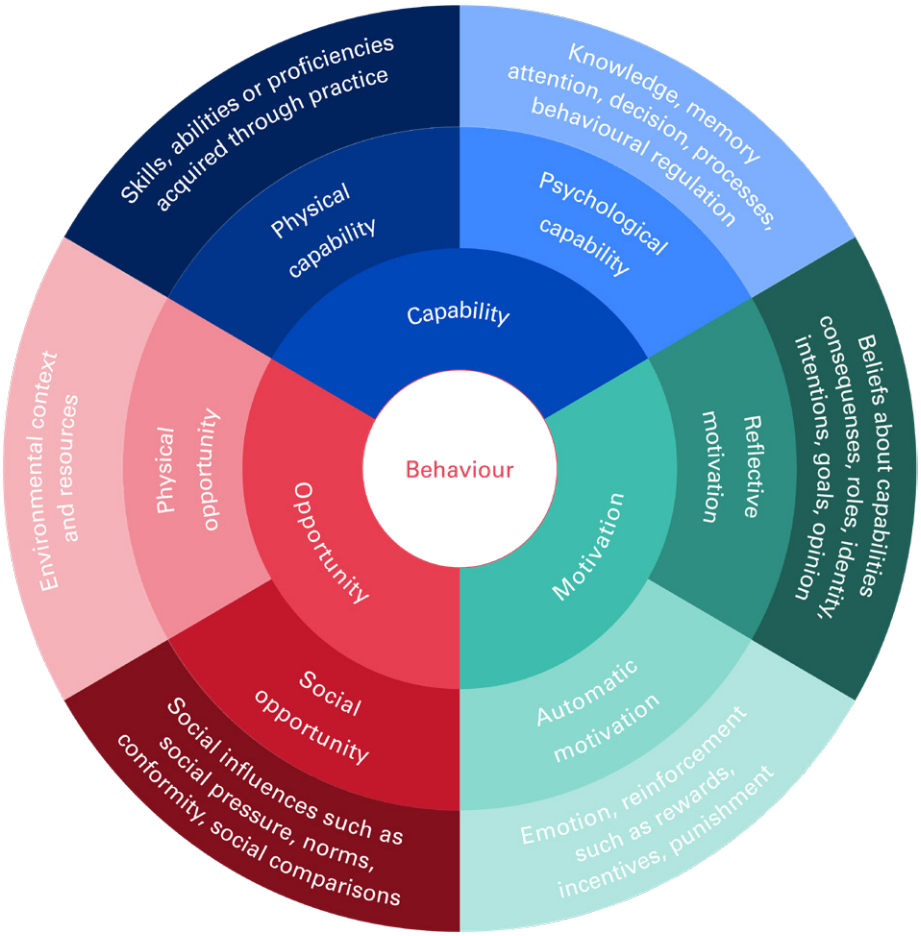


Figure 1. COM-B Model

2. Social Change UK, "A Guide on the COM-B Model of Behaviour", https://social-change.co.uk/files/02.09.19_COM-B_and_changing_behaviour_.pdf

Research Questions

MAGENTA has identified the following research questions for each of the areas of the COM-B model:

Area of COM-B	*Questions*
CAPABILITY Whether we have the knowledge, skills and abilities required to engage in a particular behavior	Do citizens know about the ESSAP service? (Knowledge of general information, requirements, process)
	Do citizens know the process to connect?
	Are citizens aware and understand the benefits of connecting to the sewage network?
	Do citizens perceive they are capable (have the rights skills and knowledge) of deciding to connect?
OPPORTUNITY Perceived cost/time constraints	Do citizens have the financial resources to connect to the sewage network?
	Do citizens have the time to connect to the sewage network?
	How does the household infrastructure help or hinder their decision to connect to the sewage network?
	Are plumbers available in the area to make the connection?
	What is the process that citizens need to follow to connect? Is there bureaucracy?
	Do citizens think their community (neighbors) expect them to connect? Do citizens expect their community and peers to connect?
MOTIVATION Beliefs and attitudes that influence the decision-making process	Do citizens believe they should connect?
	Do citizens want to connect?
	What do citizens believe will happen if they connect?

Table 1. Research questions

MAGENTA used a mixed-methods approach to the diagnosis, using secondary and primary data.

- **Secondary data:** literature review, audit of ESSAP communications materials and channels.
- **Primary data:** 5 key informant interviews with stakeholders, and 20 in-depth interviews with citizens of Fernando de la Mora.
- **Observations:** at the household and connection process level.

For more details and to consult the full research methodology, please refer to **Annex 1 – Methodology.**

Key Findings

Context

The ESSAP Sewage System Project seeks to serve 75,000 citizens with sanitation services. The system includes 161,346 meters of pipelines, aiming to make Fernando de la Mora the second city of the Asunción Metropolitan Area with the biggest sewage coverage.

The objectives of the ESSAP Sewage System Project are:

1. To increase coverage and quality of services.
2. To prevent water and soil contamination with effective sanitation measures.
3. To expand access to services to all sectors, especially the most deprived.

Between 2013 and 2015, ESSAP carried out consultative processes with neighborhood committees in Fernando de la Mora about the Sewage System Project. Inhabitants were informed about the project and were requested to provide their consent.

The construction of the sewage network began in 2020. The initial stages of the Project focused on three main geographic areas (lotes) that were assigned to different private consortiums as follows:

- Zona Norte: Lote Consorcio Katupyry
- Zona Norte: Lote Consorcio Norte
- Zona Sur: Lote Consorcio Pitiantuta

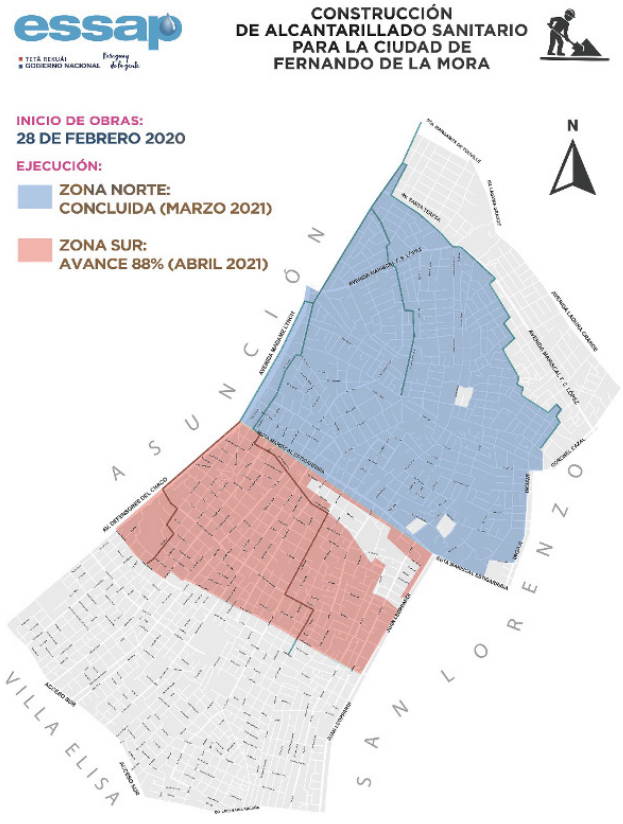


Figure 2. Map of the sewage system

During construction work, the company implemented communications activities to promote the project.[3] The shared materials included information about:

- Process to connect and household infrastructure renovations
- Fee Waiver Program
- Bill details
- Geographical scope of the project
- Project start and end dates
- Benefits

Finally, when the sewage network was available, ESSAP implemented a Fee Waiver Program available to households located in the areas where the new sewage system was built that consisted of:

- Subsidized the fee for the "right to connect" (1,800,000 guaraníes, or 300 USD)
- Reduced paperwork and required documents

The Fee Waiver Program was valid for the construction period; however, citizens can still connect their household free of the "right to connect" fee if their household is located within the areas of the project, as indicated through the ESSAP phone line.[4]

If citizens wish to connect to the sewage system and their households are not located in the constructed areas, they can do so by presenting the following documents:

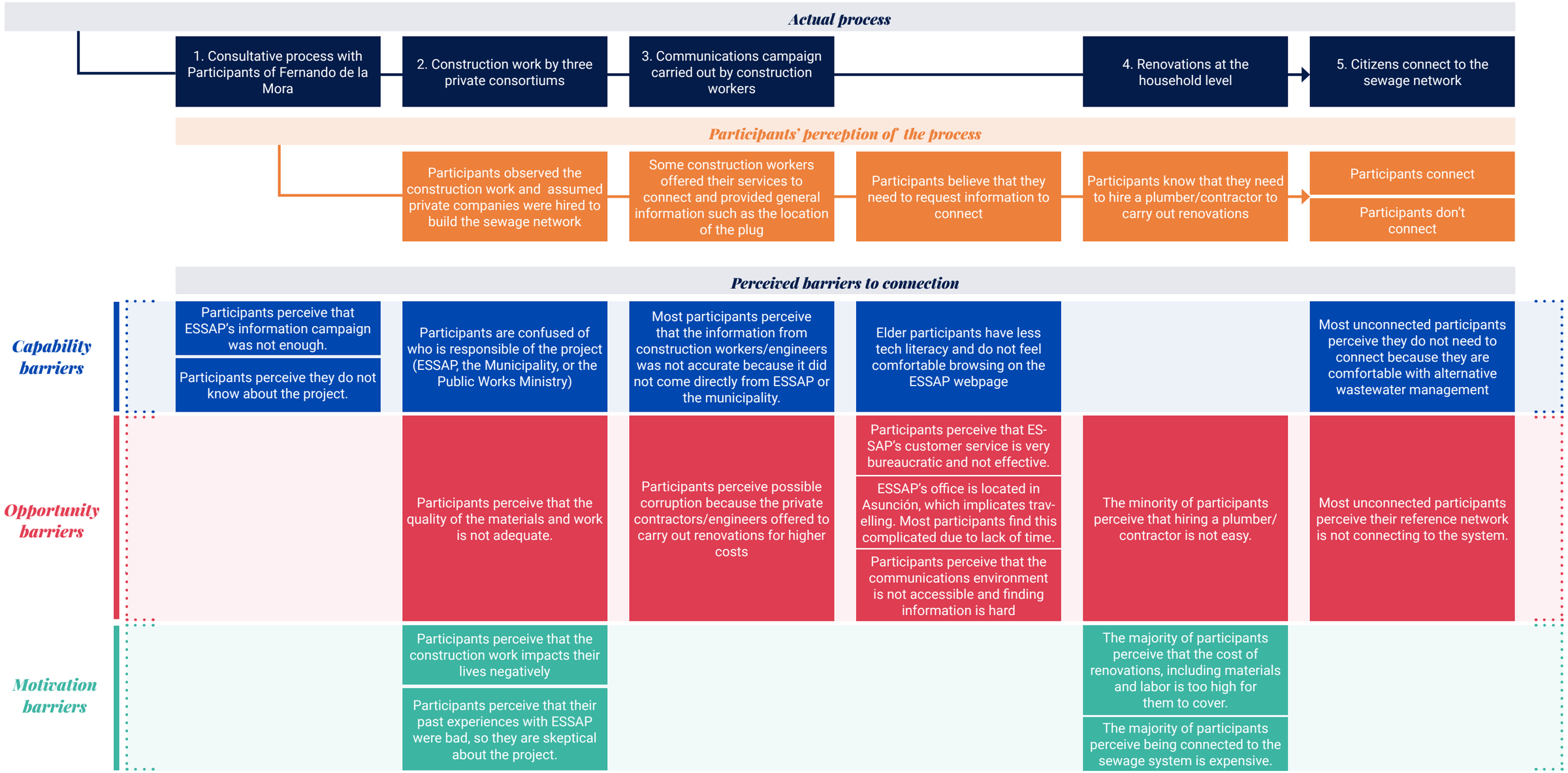
- Formal petition of household connection addressed to the ESSAP president,
- Quote of the sanitary installation,
- Photocopy of the municipal patent signed by the sanitary works professional,
- Blueprints of the sanitary installation,
- Photocopy of the ESSAP water bill,
- Photocopy of the sanitary professional's identification and phone number

The journey to connectivity will be further explained in the following section of this report.

3. Annex 3.
4. This information was retrieved through the observation process of this study, where the research team followed the connectivity process that the average citizen has to go through.

The journey to connectivity

The first level of Figure 3 presents **the process that citizens need to follow to connect to the sewage network.** The second level presents the process **perceived by the citizen's** (informed by the in-depth interviews). The third level introduces the perceived barriers to connection which are classified by the COM-B categories: **capability, opportunity,** and **motivation**.



Milestone 1:
Consultative process

The process of connecting to the sewage system began with a consultative process in which citizens were informed about the project to build the sewage network in Fernando de la Mora. However, only a minority of participants recalled the visit by officials from ESSAP.

Milestone 2:
Construction work

Three consortiums (Consorcio Katupyry, Norte, Pitiantuta) were then commissioned to build the sewage network in two target areas of Fernando de la Mora: Zona Norte and Zona Sur. The roadwork began gradually. At this point, citizens assumed that private companies were hired to build the sewage system. However, there was confusion about who was responsible for the project: the ESSAP, the Municipality, or the Public Works Ministry.

When the construction began, citizens' perception of the works was generally negative: they perceived that the used materials was low-quality to function adequately. Additionally, citizens perceived the construction was annoying and inconvenient due to the noise, smell, and dirt that resulted from the construction work.

Milestone 3:
Communications campaign

During the construction process, workers and engineers were responsible for informing the citizens that the new sewage system would be available and how to connect their households to the system, showing them the "plug" to connect and marking it with an R (***see photo***). All the participants from this study were able to locate the plug to connect to the sewage network.

However, participants perceived that the information was not official or factual since it was not delivered by ESSAP officials, or by the Municipality. Citizens also reported that the construction workers and engineers offered their services to do the renovations in their households to connect. However, the prices that they offered were perceived as high, which led some participants to believe workers were corrupt, or wanted to take advantage.

Milestone 4:

Renovation work at the household level

During the Fee Waiver Program, if citizens decided to connect, they only needed to hire a plumber, do the renovation work, and connect to the plug. However, non-connected participants believe that they need to request more information or permissions to connect, either to the ESSAP or the Municipality.[5] Requesting the information is perceived as complex and, therefore, not appealing. The barriers to accessing information, as perceived by the participants, and noted through in-field observations are displayed in Table 2.

Channel	Barriers when consulting information
ESSAP's office	**Fernando de la Mora:** • The office is right at the entrance of Fernando de la Mora, however, there is no visible sign that indicates that it is an ESSAP Office. • There isn't an entrance where citizens can enter and request information. • One of the officials seemed surprised that someone was requesting information and provided a paper that stated the requirements to connect. **Travelling to an Office** • Lack of time or bad public transport quality to travel to the office in Asunción or San Lorenzo.[6] The traffic in Asunción can be overwhelming. **San Lorenzo:** • Waiting time was perceived as short approximately "15-20 min" • The information provided is about the general process, not personalized according to the needs of the citizens • To request more information about costs, requirements, and the process to connect, citizens must call a phone line dedicated to providing sewage connectivity information.
ESSAP's Website	• The information on the website is not easily accessible for citizens. There are only a few requirements enlisted on how to connect if you are a neighboring committee or private investor. But there is no information on the household level. • The website does not allow citizens to begin the process to connect. This needs to be done through the phone line and with a cadastral account. • The website does not mention any other information such as where to go if you want to connect.
ESSAP's Website	• There are two available phone lines to contact ESSAP • The waiting time was approximately between 5 and 10 minutes • There is no follow-up, once the phone call is over, the case is closed. • For a better service, citizens are recommended to visit the offices.

Table 2: Barriers to access information

Milestone 5:

Citizens are connected to the sewage network

The process finalizes when the citizens connect and pay for the sewage service in their bi-monthly water bills issued by ESSAP.[7]

5. If the citizens decide to connect outside of the Fee Waiver Program, this is a necessary step.
6. The ESSAP office located in Fernando de la Mora does not provide attention to citizens.
7. It is important to clarify that not connected citizens also have to pay for the service.

Capability determinants to connect to the sewage network

A capability barrier occurs when a person cannot enact a behavior due to not possessing the necessary awareness, knowledge, or skills.

Psychological Capability Determinants

What knowledge, understanding, and beliefs do participants have about the sewage network?

Breaking down Attitude barriers

Limited knowledge and awareness

Most participants connected or not connected are aware that the service exists, however, there is limited knowledge about how the sewage network works and what is the process of connecting. A very common answer provided by participants when asked what they know about the service was:

- "I do not know a lot about the service / I know nothing about the service, only that it has been available for x amount of time."

Also, connected, and non-connected participants seemed aware that there are benefits of connecting to the sewage network but did not fully understand what those benefits are. These results confirm what's presented by Currie and Gahvari, who claim that generally, households do not have all the information regarding these services and do not understand the benefits of sanitation measures.[8]

This indicates that while a majority of the unconnected participants are aware of the advantages of connecting to the sewage network, they lack a clear understanding or knowledge of the specific benefits. This presents a valuable opportunity to shift from mere awareness to a deeper understanding of the benefits to incentivize and motivate citizens to connect to the sewage network.

Limited Rationality - Hassle Factors as significant barriers

Hassle factors are minor inconveniences that prevent people from acting as the steps that are needed to achieve something, may seem like a major complication that can disproportionately prevent people from acting.[9] The majority of the non-connected participants provided multiple examples about how they perceive that connecting presents several "inconveniences" that they would need to navigate, some examples include:

- The need to find a plumber or a construction worker that knows how to do the work properly
- The belief that they need to hire a certified plumber to do the connection

Awareness is the consciousness of a fact, whereas **knowledge** is associated with a deeper understanding of this information.

These concepts are interdependent but not interchangeable.

"There must be an environmental benefit because I am sure the trucks that drain the septic tanks pollute our rivers."

"It is important to connect because maybe this way we don't pollute the soil."

"We both know where the wastewater goes to, and that is the same water that we end up drinking. It is quite sad when you think about all the waste that goes to the river."

8. Currie and Gavhari, (2008).
9. BDM, (2019).

- The need to find the economic resources to be able to pay for the construction work
- The perception is that they need to go to the Municipality to request information and then be redirected to the ESSAP
- The need of having to find information to better understand what the process is to connect and where to begin, and the specific construction work that their household would require to connect
- The need to buy the construction materials, including the pipes, and the fact that they do not know the quantity of materials needed

Limited Rationality - Present Bias: current sanitation systems are preferred

The Present Bias means that people generally favor a smaller gain in the short run over a larger gain, even when considering trade-offs.[10] Most of the non-connected participants mentioned that at the moment, they are comfortable with their current sanitation systems (cesspools or septic tanks), and do not see the need to connect.

Some of the factors that contribute to this rationale are:

- The number of people that live in the household
- How recently they built their septic tank or cesspool
- The size of the septic tank or cesspool
- The feeling of having to prioritize other expenses over connecting

This is in line with the findings from the "The Last Mile to Connectivity" by the IDB, where it was identified that even households with financial means to connect might delay their decision due to behavioral barriers such as the present bias and the status quo bias[11].

Information avoidance:

Individuals might actively and or unconsciously avoid information if this information can threaten their beliefs, or force them to act, or upset them, or simply because they are already overloaded with information.

Barriers to connectivity: the impact of Cognitive Biases

The third most significant capability barrier identified is related to the cognitive biases the participants presented regarding the information they have received about the sewage network.

Cognitive Biases are the information the brain is willing to consider. The mind tends to take mental shortcuts to make sense of things, and these shortcuts can lead to errors. This means that choices are usually based on imperfect information.

The most prevalent bias presented by the participants was information avoidance, as most of the non-connected participants reported that they received some sort of information but…

- "The information must have been shared with another family member, and that person did not pay attention or did not care or did not listen."
- "It was just the constructors who were doing the road work and at some point, they showed them where the connection point was, but there was no further information."

Messenger Effect:

The value individuals give to a piece of information is largely conditioned by its source. The level of trust, familiarity and credibility of a communication channel is a key driver of receptiveness.

10. BDM, (2019).
11. IDB, (2020).

- "Did not take the time to find out further about what needed to be done to connect once they were told that the connectivity was available."
- "Did They received the flyer, but they cannot remember the information it had."

These examples also reflect that there was a bias around who communicated the information with the citizens of Fernando de la Mora – also known as the messenger effect. The participants' perception was that private companies did the construction work, and that the workers provided some basic information about the process of connecting. However, this information was not perceived as official for two reasons: (1) because it did not come from the ESSAP or the Municipality; (2) because the construction workers were trying to make extra money by charging the citizens to connect their households.

Agency and support as a driver of connectivity

This means that many of the participants felt that they could decide to connect. However, from this majority, only a few explicitly mentioned that they would have support from the other household members. This is an important area of opportunity to promote the knowledge and awareness of other family members who are not necessarily the decision-makers.

Finally, there were only a minority of participants perceived that they did not have the agency to decide to connect due to a lack of skills and knowledge or a lack of support from their families to connect.

Physical Capability Determinants

What physical capacities (strength, skills, stamina) do participants have to do the desired behavior?

External factors as barriers to connect

One-third of the non-connected participants mentioned that their age is a barrier to connecting or accessing public services. This was particularly significant in the northern area of Fernando de la Mora where many elder inhabitants live.

"I feel a bit uncomfortable around technology. I know that for the younger generations, it's easy, but for my generation, it's difficult."

"Why would I want to travel to ESSAP's office to make a claim, I am old, and they never solve anything. You can be there for hours, and when they finally see you, they leave you hanging."

"For the moment, I can't pay for materials; this is why I keep telling my sons that they should do it because this house is for them, I am old, and maybe tomorrow I will not be here anymore, so they should do it."

Recommendations

Based on these findings, the following recommendations can be made to address the Capability barriers:

1. **Increased Awareness and Knowledge:** The municipality and the ESSAP could work together to inform citizens about the benefits of connecting to the sewage network and the process of connecting. This can be done through community events, informational flyers and brochures, door-to-door visits, or online information sessions. It is important to transition from awareness to knowledge.
2. **Addressing Hassle Factors:** Simplify the process of connecting to the sewage network by providing clear information and instructions. Some activities could be:
    - Creating a one-stop shop to request information and make connections – we recommend this to be based in the Municipality, as the citizens find it more accessible than traveling to ESSAP´s office in Asunción or San Lorenzo.
3. **Addressing the Present Bias:** Create rapid and small gains or rewards for people that connect to the sewage system. This could involve offering incentives such as a reduction in monthly fees for those who connect within a certain timeframe or other benefits such as priority access to certain services or programs.
4. **Addressing Cognitive Biases:** Be mindful of the messenger effect and choose the most appropriate and effective communication channels to reach citizens and provide them with information about the sewage network. They should also work to increase the perceived officialness of the information received by using official channels and partnering with trusted organizations.
5. **Addressing external factors such as age:** Community outreach programs can be conducted that focus on communicating with the elderly population through in person visits to explain the process to connect and help them dismiss any fears or misconceptions about the sewage network. Also, discounts for the elderly could be offered or special financial assistance for materials, labor, and other expenses associated with connecting to the sewage system.

Capability determinants to connect to the sewage network

A motivation barrier occurs when a person does not enact a behavior due to not wanting to do it, or not believing that they should do it.

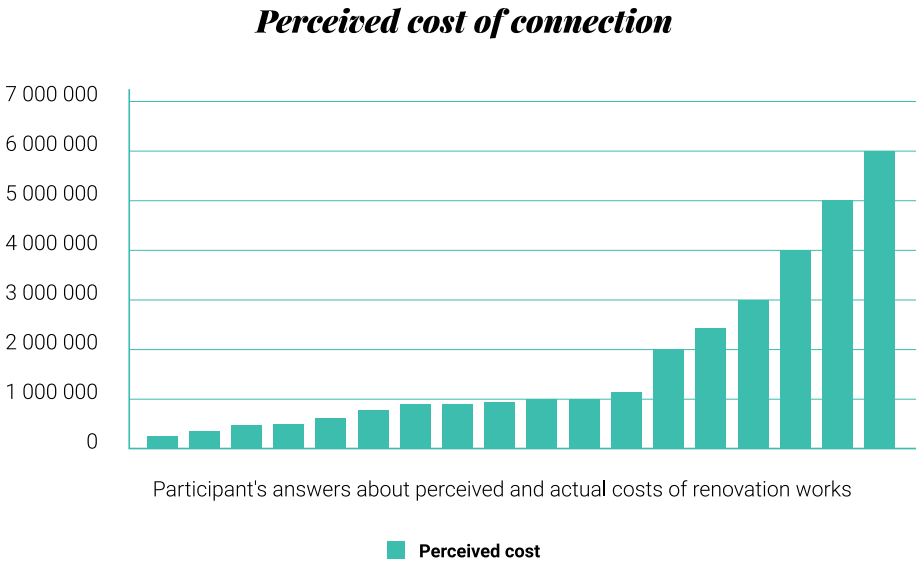
Reflective Motivation Determinants

What types of reflection and premeditation do study participants engage in regarding the desired behavior? What plans have they made around doing or not doing this behavior, and how do they evaluate doing it?

Perceived costs as an interest barrier: Connecting does not seem affordable

Most of the participants, connected and non-connected, referred to the cost of the connectivity as the most important barrier for them, or their neighbors. The connected participants shared that they perceived the cost of connecting their household as "expensive", or something they "can't afford".

The high-perceived cost of connecting motivates participants to 1) Shift their focus to other priorities; 2) Decide to keep their current alternative methods, such as septic tanks and cesspools.



Graph 1. Perceived cost of connection

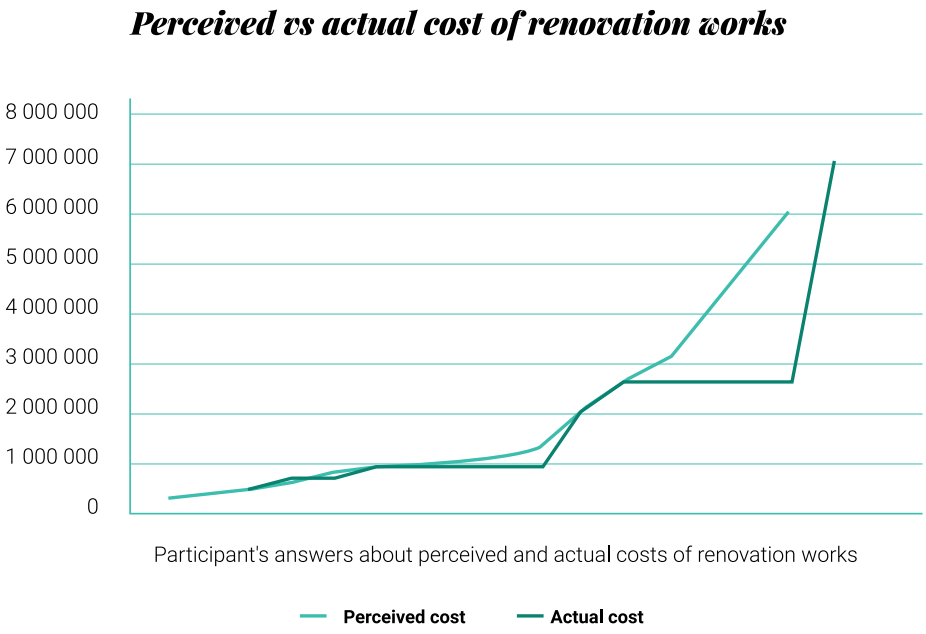
Graph 1 shows the perceived cost of household renovations needed to connect to the sewage network. The average perceived cost to connection ranges from 700,000 to 1,200,000 guaraníes. However, most citizens perceived the cost to be way higher than that: ranging from 2,000,000 (275 USD) to 6,000,000 (825 USD).

> *"I have not connected because I have to buy the pipes and all of the materials, and at this moment, the money is not enough."*

> *"...That's my only complaint. It's going to cost us too much. The cost will be very high because as I tell you, I have to break half of my floor all the way out to my gate and also break my sidewalk from my gate."*

> *"For the moment, I can't pay for materials; this is why I keep telling my sons that they should do it because this house is for them, I am old, and maybe tomorrow I will not be here anymore, so they should do it."*

It is important to highlight that costs vary depending on the antiquity of the house, location of the pipes, and materials used, among others. Graph 2 shows the relationship between perceived cost and the actual cost of renovations in connected households. Citizens with connected households reported that they paid from 350,000 guaraníes (48.20 USD) to 7,000,000 guaraníes for the infrastructure renovations in their households, including materials and labor.
It is important to highlight that costs vary depending on the antiquity of the house, location of the pipes, and materials used, among others. Graph 2 shows the relationship between perceived cost and the actual cost of renovations in connected households. Citizens with connected households reported that they paid from 350,000 guaraníes (48.20 USD) to 7,000,000 guaraníes for the infrastructure renovations in their households, including materials and labor.

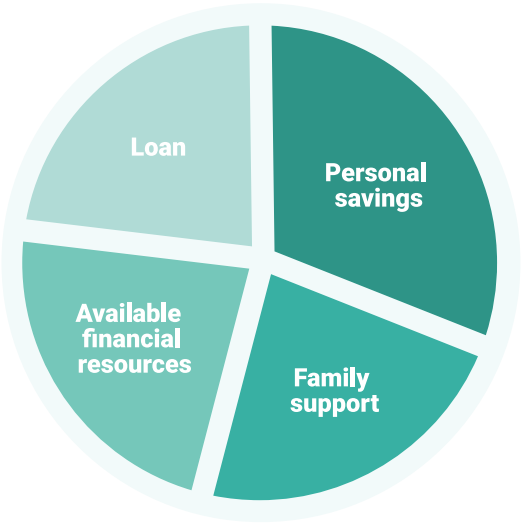


Graph 2. Actual vs perceived cost of connection

It was found that the cost of renovation work, both perceived and actual, was accurately reported by the participants. However, a significant level of uncertainty was noted among the participants regarding these costs, and this uncertainty can be identified as a barrier in their decision-making process to undertake the renovation work. The findings highlight the need for increased clarity and transparency in cost estimation to minimize the uncertainty and facilitate informed decision-making.

Additionally, connected participants shared how they were able to finance the cost of the renovation work, and non-connected participants were asked on how would they cover the cost in case they were to connect. As Graph 3 shows, the answers were evenly distributed between: personal savings, available financial resources (money they could use at the moment), family support, or requesting a loan, but did not specify from whom.

Financing options

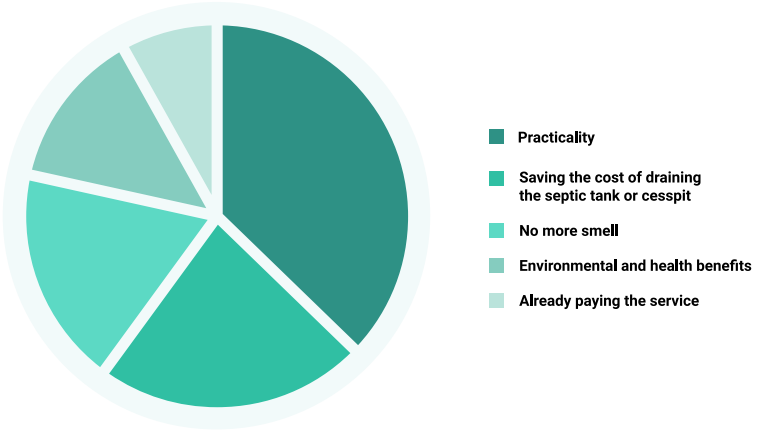


Graph 3. Financing options

Potential Gains of connecting as a key driver

All the participants identified potential gains or benefits in connecting. The most common answer refers to the practicality of having the sewage network, which can reduce the complexity of dealing with septic tanks or cesspools and simplify their waste management.

Identified Potential Gains



Graph 4. Identified potential gains

Words used in Spanish to refer to "practicality":

- Comodidad
- Conveniente
- Facilidad
- Descanso
- Tranquilidad
- Accesibilidad
- Practicidad

"It's good, because there will be no more water in the street, no more bad odor from the old cesspools. We don't do it but, a lot of people throw everything in the street, right. And then, it would be more convenient."

Simplifying the process to connect

All the connected participants perceived that the effort invested in the connection process was simple. However, less than half of the non-connected participants expressed that they would find it "easy" to connect. This provides an opportunity to communicate that the process is simple and straightforward (assuming that it is).

Breaking down Attitude Barriers

Negative Emotions towards the sewage network

For those participants who are not connected, the emotions that came up were:

- **Fear** of the sewage network – both in terms of its novelty and the potential negative impact on the community's well-being caused by the perceived substandard quality of the associated road work infrastructure.
- **Anger** – There is a sense of anger and indignation regarding the perceived imposition of fees for a service that is currently not being utilized.

Prior experiences related to the sewage network or the ESSAP

For both connected and non-connected participants, there are different memories from past experiences that can play a role in their perception of the sewage network. These were the most referenced experiences:

- The memory of the construction of the sewage system and the roadworks and its impact on the lives of the citizens of Fernando de la Mora.
- Unsatisfactory experiences ESSAP in the process of registering a complaint or seeking assistance, characterized by the lack of response or the inefficiency of their attention.
- The memory of a long time ago, when Hidroxil attempted to install a sewage network built with clay pipes during the period of dictatorship, thereby symbolizing an era of corruption and suppression of public voice.

Driven by emotions, values, and aspirations

Additionally, the construction of the sewage network generated positive emotions among some of the participants who connected to it. These participants reported feeling "happy" and "satisfied" with the availability of the network and the fact that they could connect to it, it is perceived as a significant accomplishment.

Another significant finding was the participants' aspirations regarding their connectivity to the sewage network. These aspirations reflect the participants' desire for progress and improvement and their commitment to ensuring a more sustainable and modern future for their communities. These aspirations indicate the participants' strong belief in the importance of the sewage network and the positive impact it can have on their lives and communities.

Furthermore, some participants who were connected to the sewage network expressed that access to the sewage network is both a need and a responsibility that citizens have with the government. Only one participant stated openly that the use of cesspools should not be used anymore. This demonstrates a conviction about what is right and what is wrong.

> *"We feel very happy with this decision to connect. Many people expected the sewage system. I believe that this service is in the benefit of everyone."*

> *"The sewage system is necessary. Any technology, any progress that comes is necessary. We have to accept that technology increases and changes every day."*

> *"We need to progress - that's why these projects are done, so we can progress."*

Reflective Motivation Determinants

What types of subconscious factors, such as desires, impulses, and inhibitions, could be in place?

Participants' motivations as a driver to connect

A majority of the non-connected participants express a positive perception towards connecting to the sewage network, citing reasons such as its perceived importance, necessity, and potential benefits. Conversely, a minority of participants express disinterest or are unable to differentiate between being connected or not.

Recommendations

Based on these findings, the following recommendations can be made to address the Motivation barriers:

1. **Cost awareness campaigns to address uncertainty:**
   - **Actual Cost Awareness Campaigns:** Conduct cost awareness campaigns about the actual cost of household renovations needed to connect to the sewage network and how it varies depending on the household's antiquity, location of pipes, and materials used can help reduce the perception of high cost.
   - **Cost Comparison Campaigns:** Conduct cost comparison campaigns between the cost of connecting to the sewage network and the cost of alternative methods such as septic tanks and cesspools, this can help citizens understand the long-term benefits of connecting to the sewage network and overcome the affordability barrier.
2. **Community Outreach Programs:** Conduct community outreach programs on the importance of connecting to the sewage network. To generate more trust, these programs can be designed by the community and led by the Municipality and the ESSAP. This can be through public meetings, community workshops, and door-to-door campaigns.
3. **Demonstration Projects:** Implement demonstration projects in selected areas to showcase the positive impacts of connecting to the sewage network. This can include before and after comparisons of the waste management system and the overall impact on the community.
4. **Promote a sense of responsibility:** Highlight the responsibility of citizens to connect to the sewage system, particularly for the advancement of the community in the long term.
5. **Addressing negative experiences:** This can be achieved through building trust and addressing the root causes of the negative experience. This can be done by: Improving customer service, listening, and engaging with costumers; providing clear and transparent information; building a positive community culture around connecting to the sewage network, offering incentives and rewards.

Opportunity Determinants to connect to the sewage network

An "opportunity barrier" occurs when a person does not enact a behaviour due to something outside their control.

Physical Opportunity Determinants to connect

What opportunities, e.g., time, location, and resources, for doing the behavior does the environment provide?

Breaking down structural barriers

Lack of resources to connect

Structural barriers are the obstacles that are not linked to the willingness of citizens to connect, but rather to the infrastructure and living conditions. This is the case for the majority of the non-connected participants who reported that they lack the necessary economic resources to do so. This is also linked to the motivation barrier that refers to the perceived cost of connecting.

One of the participants shared that they began the process of connecting but could not complete the house construction due to a lack of funds. This is a clear example of how structural barriers can directly impact individuals and their ability to access connectivity.

Furthermore, it was mentioned that the COVID-19 pandemic impacted the financial stability, which exacerbated the already existing structural barriers and made it even more challenging for people to access the necessary resources to connect.

Citizens with connected households reported that the infrastructure renovations in their households paid from 350,000 guaraníes (48.20 USD) to 7,000,000 guaraníes (964 USD). Considering the minimum wage is 2,550,307 guaraníes (350 USD),[12] having to carry out household renovations represents an affordability barrier.

Other structural obstacles to connect to the sewage network

Additional to the lack of economic resources, the participants also mentioned other structural barriers to connecting to the sewage network; the most mentioned ones were:

- Perceptions of poor quality of the sewage network infrastructure
  - "The sewage network emits odors"
  - "The streets are in poor condition after the construction work"
  - "The pipes seem to be very thin"
  - "The materials are not good quality"

"Well, it's a huge expense. Sometimes I don't even have enough money to pay my debts. We want to connect someday, but we will see how things go in 2023"

"We will do it when there's work, sometimes there's nothing. We are day laborers, and we don't have enough for those expenses. Our mom is also sick, we need to buy medicine and take her to the doctor"

12. La Nación. (2023). "Paraguay ocupa el cuarto lugar en salario mínimo más alto en la region".

- Challenges in locating and reaching a plumber for the service
- Lack of time because of people working long hours away from home
- Insecurity which leads to a lack of trust in workers
- Feeling uncomfortable with the use of technology to access information
- The infrastructure of their household presents challenges to achieve connectivity
- Lack of access to the sewage network because they are not connected to the water service with ESSAP (still use a water well)

Governing Entities play a role in the promotion of desired behaviors

Governing entities play an important role in promoting or obstructing a desired behavior. The participants from this study expressed a lack of trust in service providers, the ESSAP, the Government, and the Workers or Engineers from the private companies that were hired to build the sewage system. This mistrust, which is likely a result of prior negative experiences, has a significant impact on the community's willingness to access and utilize the services provided. The participants highlighted the need for open communication and transparency; this barrier will be addressed subsequently.

Additionally, one-fourth of the participants mentioned that the processes with ESSAP were very bureaucratic, which demotivates them to seek more information about the sewage system.

It was also found that the participants did not trust the construction workers that approached them to offer their services to connect their households with the network. The participants perceived that the costs were unfairly high and that it could also be a case of corruption. This finding relates to the "messenger effect bias" presented in the Psychological Capability Barriers section.

The government can provide incentives to promote connectivity

Policies and regulations surrounding sewage connectivity can provide incentives for individuals to connect.[13] In Paraguay, existing laws mandate that citizens connect to the sewage network if available in their area. However, awareness and understanding of this obligation are limited among the population. Only the minority of participants mentioned that fees could be imposed to the households that don't connect or connect without providing a notification.

On the other hand, the fact that participants are already being charged for the sewage system service seemed to incentivize them to connect; however, as previously stated, citizens only feel comfortable with having to pay if they request the service.

> "I Ultimately, none of the participants recognized the "Fee Waiver Program" instituted by ESSAP as a subsidy. Despite this, the participants indicated that financial incentives would be a valuable motivator for connecting to the sewage network."

Local Laws and Regulations:

- ***Law 1614 -***

Establishes legal standards that regulate the visioning and pricing of potable water and sewerage

- ***Law 716 -***

Protects the environment and quality of life against environmental crimes

- ***Law 5428 -***

Aims to regulate the treatment, purification, discharge and control and inspection of the sewage effluents.

13. IDB, (2020).

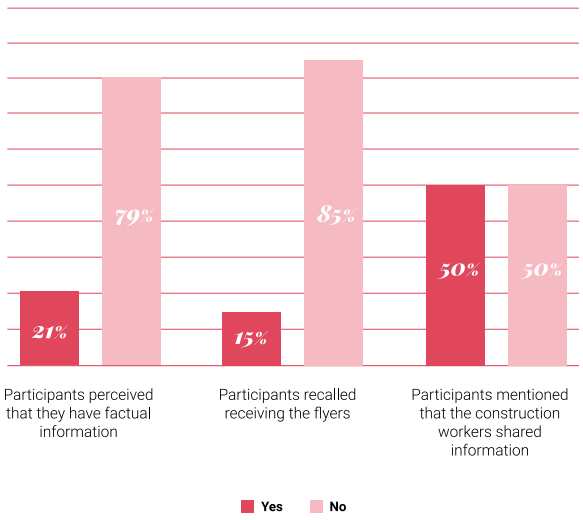
The impact of the communications environment on connectivity choices

The information that the citizens of Fernando de la Mora receive and the channels and sources that conduct this information have a significant role in shaping their attitudes and interests – which impact our behaviors.

To promote the utilization of the sewage utility service, ESSAP implemented a communications campaign starting in August 2021 to inform citizens about the sewage utility service that included information about the "Fee Waiver" program. In addition, ESSAP published information about the process on its website. The communication activities included providing manuals on how to connect to the service, infographics, and brochures. It is important to note that these communication activities were not part of a communications strategy according to ESSAP's Connectivity Document.[14]

The results show that the information shared by the ESSAP increased the levels of awareness of the existence of the service. However, understanding the sewage network's benefits still needs to improve. As Graph 5 shows, most of the non-connected participants reported that they perceived a significant lack of factual information. Moreover, one in three participants mentioned that they did not receive any information at all.

Perception of received information about the sewage connection among connected participants



Graph 5. Perception of received information

The lack of factual information can lead to confusion, which limits citizens' capability to take action to connect. The main areas of confusion that participants mentioned are:

- What is the process of connecting?
- Who can provide the participants with information, the ESSAP or the Municipality?
- How does the sewage network function? Where does the water go?
- Is the sewage network already working?
- What is the cost of the service?

> *"My cesspit has not presented any problems, but I believe it's important to connect to the sewage network, as I am already paying for it, and it's expensive"*

14. Refer to Annex 3 to consult ESSAP's communications materials.

Unlocking the potential of communications to improve the connectivity rates

The same way that the communications environment can negatively impact the uptake of behaviors, it can also be seen as an opportunity to promote them. In this line, it is important to understand the preferred communication channels for the citizens of Fernando de la Mora, which are presented in Graph 5.[15]

More participants expressed that they would rather receive information through house visits, as this is an opportunity to ask questions. This alternative presents a caveat, as many Fernando de la Mora citizens are not home during weekdays. The second most preferred channel is WhatsApp, which presents a cost-effective alternative and increased accessibility; with this channel, it is important to consider that some elder people do not feel comfortable using technology. Lastly, the participants mentioned printed materials such as flyers through the municipality's social media, calls, emails, and the meetings of the neighboring committees.

Preferred communications channels

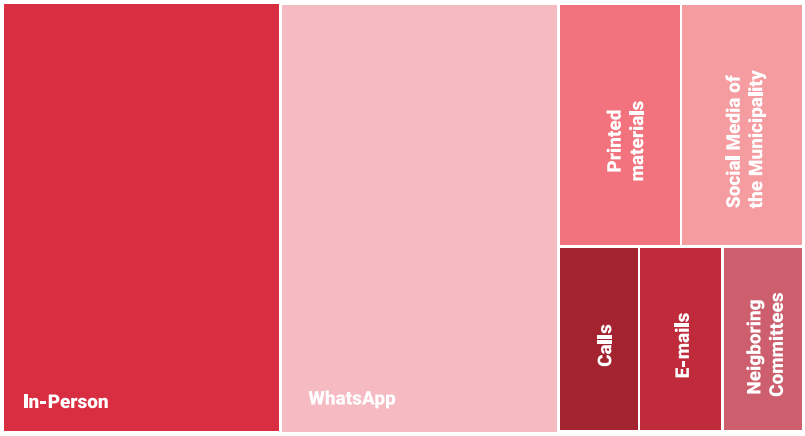


Figure 3. Preferred communications channels

The power of referral communications

Approximately half of the participants shared that they heard information about the sewage network (about the process of connecting, recommendations, and complaints) through other neighbors or extended families. This indicates the significant impact of "word of mouth communications" in shaping their perceptions. This presents a potential opportunity to reach wider audiences through the recommendations and experiences of others around them.

> *"Some people say the sewage network is good, others say it's not good – why would that be?"*

15. MAGENTA recommends including this question in the quantitative sample to better understand the preferred communication channels of a wider sample.

Social Opportunity Determinants

What social cues and cultural norms exist to promote or hinder engagement in a particular behavior?

Empirical expectations

Establishes legal standards that regulate the visioning and pricing of potable water and sewerage

Normative expectations

refer to a rule of behavior that people engage in because they think others in their group expect them to do so.

Social Influence has the potential to increase connectivity rates

The attitudes and behaviors of the people that matter to the citizens of Fernando de la Mora can motivate or demotivate them to connect to the sewage system.

This study found that most participants believe that most of their neighbors are connected to the sewage network (empirical expectations). It is interesting to note that the participants who perceive that only a minority of their neighbors are connected are unconnected households.

Most participants mentioned that their reference networks' attitudes and behaviors could not influence their connecting decision and that there isn't an expectation for them to connect (normative expectations). This was a clear trend for the participants from Fernando de la Mora, Zona Norte, who do not consider social pressure a relevant factor in connecting.

The participants that felt some social pressure to connect it was found that their closest neighbors played a crucial role in this pressure. This was due to a combination of factors, such as the fear of being left behind, the desire to conform to the actions of others, and the need to avoid potential conflict and blame. These close neighbors were perceived to significantly influence the participant's decision to connect, and their opinions and behaviors were seen as important indicators of what was considered socially acceptable.

"We realized that everyone was connecting, so we decided to do it was well. We don't want to be blamed if something explodes in the neighborhood"

"Here, nobody pays attention to anything, everyone is dealing with their own problems."

Understanding the community dynamic of Fernando de la Mora

Fernando de la Mora is a commuter or dormitory town: residents work in the Asunción Metropolitan Area. Still, they live in Fernando de la Mora to cut living costs and rent expenses. Therefore, people spend limited time in the neighborhoods, and this social dynamic leads to low social cohesion, as there are no spaces to talk with the other community members. A minority of the participants expressed that they have conflictive relationships with their neighbors; however, only one of those conflicts is related to wastewater management and the sewage network.

Nonetheless, it was observed that the Municipality receives multiple complaints about the neighbor's wastewater management. This can lead to the escalation of conflicts, resulting in the imposition of sanctions and further weakening the community's social cohesion.

The low communication rates among neighbors impact their collective self-efficacy about the sewage system. Half of the participants expressed that the sewage network has positive impacts and benefits for the "community" as a unit. However, the other half expressed that the decision to connect should be taken individually and did not mention any collective benefits.

Meta-Norms and their influence on the process to connect

Meta-norms are underlying ideologies and unwritten rules, deeply entrenched in people's culture and identity, cutting across sectors, and conditioning many behaviors. For this research, three meta-norms have been identified:

Gender ideologies

A limited number of female participants acknowledged the presence of strong gender ideologies. Some mentioned that the traditional gender dynamic in their culture dictates that men take on the role of financial providers, and thus hold decision-making power regarding household expenses. Additionally, it was noted that women often lack familiarity and exposure to construction and infrastructure work.

Family roles and relationships

The results of the study indicate that family roles play a significant role in the decision-making process at the household level. Elder women often delegate decisions to their sons. Moreover, the study found that caring for elderly family members can consume a substantial amount of time and resources, which results in the sewage network connectivity being given low priority. These findings highlight the importance of understanding the interplay between family dynamics and decision-making in shaping household priorities.

A barrier of knowledge: Legal compliance

There is very limited knowledge of the laws and regulations around sewage connectivity in Fernando de la Mora. Only a minority of participants mentioned that they believed it was an obligation or that connecting to the sewage network is established by the law. However, many of them expressed that they would connect if it was an obligation or if it was required.

Recommendations

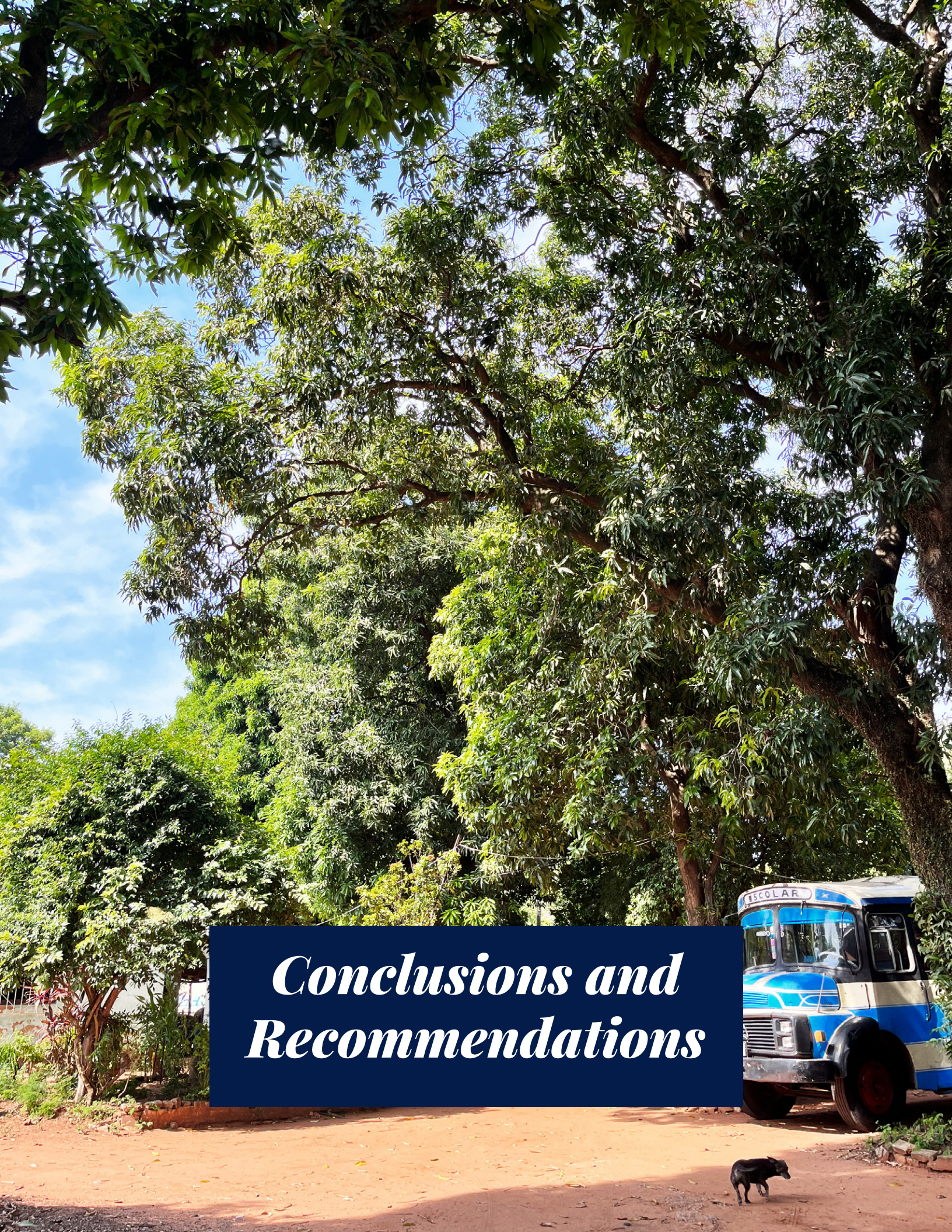
Based on these findings, the following recommendations can be made to address the Motivation barriers:

1. **Address structural barriers:** The findings highlight that the lack of resources is the main structural barrier to connecting to the sewage network. The governing entities could consider implementing financial incentives such as the "Fee Waiver Program". Additionally, it's recommended that these programs be shared through an effective communications strategy that ensures that citizens understand the benefits and process of accessing the incentive.
2. **Increase awareness and knowledge of policies and regulations:** The governing entities could conduct more comprehensive public awareness campaigns to share with the population their obligation to connect and the benefits of doing so. The information can be communicated through multiple channels and be easily accessible.
3. **Address bureaucratic barriers:** The governing entities could streamline the processes and reduce bureaucracy to make it easier for citizens to access information and connect to the sewage network.

4. **Promoting normative expectations through community-based activities:** The ESSAP and the Municipality could develop a community-based program that brings together different community members to participate in activities that highlight the values and aspirations of the citizens of Fernando de la Mora.

5. **Promoting normative expectations through community-based activities:** The ESSAP and the Municipality could develop a community-based program that brings together different community members to participate in activities that highlight the values and aspirations of the citizens of Fernando de la Mora.

   - **Referral Program**: ESSAP could implement a referral program to incentivize and encourage existing users to promote the service to their network. This program could offer a discount or credit on the referring user's next bill as a reward for successful referrals. This recommendation aligns with the finding about "word of mouth" being a good communication channel.



Conclusions and Recommendations

Conclusion

This section identifies the key behavioral barriers and drivers, organized by the level of the COM-B. As an overarching conclusion, this study has found that the following barriers prevent Fernando de la Mora citizens from connecting to the sewage system:

Capability

Significant barriers to connecting to the sewage network include limited knowledge, awareness, and hassle factors. Although most participants are aware of the benefits of connecting their household to the sewage system, they do not have the knowledge to deeply understand the process to connect and its benefits. Participants find hassle factors to be a determinant barrier: finding a plumber, limited economic resources, and lack of understanding of the process result in low connectivity rates.

Opportunity

Structural factors such as lack of economic resources and poor household infrastructure are the main barriers preventing citizens from connecting to the sewage network in Fernando de la Mora. The onset of the COVID-19 pandemic and its resulting economic shocks are external factors that contribute to lack of connectivity in the city, as citizens cannot cover the necessary renovation costs. Another significant barrier is the distrust in service providers, government, and construction workers since it creates a generalized perception of corruption and ineffectiveness around the service.

Motivation

The most important barrier shared by the participants of this study was connectivity costs. Other barriers include negative emotions towards the service, such as fear of using an inadequate system (related to perceptions of low-quality materials used in the construction) and anger of being charged for the service regardless of their household's connection status. Despite this, all the participants recognize potential gains from connecting their household to the sewage system: practicality, long-term financial savings, lack of odors, environmental and health benefits, and using a service they are already paying for are the main gains identified by the citizens.

The behavioral determinants are the key insight to designing social and behavioral change interventions. The recommendations section will present initial insights on how to address these behavioral barriers and drivers from a Social and Behavioral change perspective.

Recommendations

Based on the findings and the recommendations provided for each section of this report, this final section presents a general guide of recommendations to address the barriers to connectivity in Fernando de la Mora.

Assumptions

These recommendations consider the following assumptions:

- The sewage system is functional and provides benefits to those who connect to it
- There is political will and shared interest between the Municipality of Fernando de la Mora and ESSAP to collaborate
- These recommendations are based on the available data and insights. However further data implemented by the IDB could provide a more comprehensive understanding of the situation and help inform the implementation of these suggestions

1. **Conduct Community Outreach Programs** aimed at increasing awareness and knowledge of the sewage network in Fernando de la Mora. The program should cover key information such as: Why was it built? How does it work? What are the benefits of connecting? What is the step-to- step process to connect? What are the policies and regulations about sewage connectivity?

- These programs can be implemented through community events, informational flyers and brochures, door-to-door visits, or online information sessions. Some considerations:
- A joint program between the Municipality of Fernando de la Mora and ESSAP would be more impactful and build trust among the participants.
- Be mindful of the messenger effect and choose the most appropriate and effective communication channels to reach citizens.
- When communicating with the elder population, in-person visits are recommended to explain the process and provide any relevant information.
- The communication strategy could build the messages around the following key determinants:
  - Highlighting the potential gains of connecting: practicality and the impact on health and the environment
  - Emphasizing a sense of responsibility
  - Stressing the importance of legal compliance
  - Conveying the vision of a more progressive and modern society

2. **Conduct Cost Awareness Campaigns** aimed at increasing awareness and knowledge of the sewage network in Fernando de la Mora. The program should cover key information such as: Why was it built? How does it work?
3. **Simplify the process of connecting** by addressing hassle factors. Provide clear information and instructions to connect to the sewage network. Reduce the time, and effort citizens need to invest in the connectivity process.
    - For example: Create a one-stop shop to request information and register connections located in the Municipality.
    - Provide citizens with a starter package that includes a connectivity manual, a list of materials to buy, and the contacts of plumbers.
4. **Create rapid and small rewards for people to connect to the sewage system,** such as a reduction of monthly fees, priority access to certain services or programs, financial incentives, and discounts for the elderly.
    - For example: Implement a community rewards program for the people that connect, building a positive community culture around connecting to the sewage network.
5. **Implement Demonstration Projects** in selected areas to showcase the positive impacts of connecting to the sewage network.

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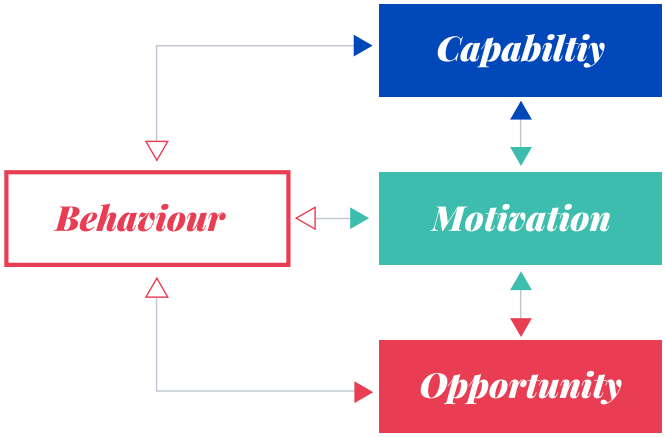
Annex 1: Methodology

Theoretical Framework: COM-B

The behavioral change COM-B Model served as the analytical framework for the analysis. COM-B proposes there are three key determinants to a behavior, as described below. The acronym argues a mathematical function: Capability + Opportunity + Motivation = Behavior. The Model considers whether a person has the knowledge, skills, and abilities (capability); external chances (opportunities); and psychological enthusiasm (motivation) for doing a behavior.



Capability

Whether an audience has the knowledge, skills, and abilities required to engage in a particular behavior.

- **Psychological Capability**: our knowledge/psychological strength, skills, or stamina
- **Physical Capability**: our physical strength, skill, or stamina

Lines of inquiry:

- Is the audience aware of the issue or the need to change behavior?
- Does the audience have the right knowledge to do it?
- Does the audience have the right skills to do it?
- Is the audience physically and mentally able to do it?

Motivation

Motivation refers to the internal processes which influence our decision-making and behaviors. Its two components are:

- **Reflective Motivation:** reflective processes, such as making plans and evaluating things that have already happened
- **Automatic Motivation:** automatic processes, such as our desires, impulses, and inhibitions

Lines of inquiry:

- Does the audience believe they should do it?
- Does the audience want to do it?
- Does the audience have habits in place to support it?
- Does the audience have biases / heuristics that do not support connectivity?
- Are there any consequences if my audience doesn't do it?

Opportunity

The external factors which make the execution of a particular behavior possible.

- **Physical Opportunity:** reflective processes, such as making plans and evaluating things that have already happened
- **Social Opportunity:** aopportunities because of social factors, such as cultural norms and social cues

Lines of inquiry:

- Does the audience have the resources (time, money, access, tools) to do it?
- Will the system or environment allow the audience to do it?
- Will the audience's social and physical environment help or hinder them in doing it?

Key Concepts

The following concepts relate to the different friction and fuel points identified throughout the analysis.

Concept	*Definition*
Capability	Capability is defined as an individual's psychological and physical capacity to engage in an activity. It also refers to whether an individual has the awareness, knowledge and skills to enact a behavior.
Psychological capability	Individual's knowledge, psychological strength, skills or stamina.
Attitude	An attitude is what someone thinks or feels about something. Mixing cognitive and emotional elements, attitude defines people's predisposition to respond positively or negatively to an idea, a situation, or a suggested change.
Awareness	Awareness is the consciousness of a fact
Knowledge	Knowledge is associated with a deeper understanding of this information (BDM). "It is important to keep in mind that people tend to ignore 'negative' information related to what they are doing and can sometimes favor prior 'evidence' that reaffirms their actions. Perception is very selective."
Cognitive biases	Cognitive biases refer to the use of mental models for filtering and interpreting information, often to make sense of the world around us.
Simplicity bias	We discard specifics to form generalities, reduce events and lists to their key elements, and favour simple-looking options over complex, ambiguous ones.
Information avoidance	Individuals might actively and/or unconsciously avoid information if this information can threaten their beliefs, or force them to act, or upset them, or simply because they are already overloaded with information.
Anchoring to a piece of information	Over-reliance on one trait of a subject or piece of information when making decisions. Anchoring often refers to people's initial exposure to a piece of information (commonly a number) that serves as a reference point that influences subsequent opinions and judgements.
Messenger effect	The value individuals give to a piece of information is largely conditioned by its source. The level of trust, familiarity and credibility of a communication channel is a key driver of receptiveness.
Confirmation and belief	People easily ignore or criticize information that contradicts their existing beliefs and assumptions, and filter it in a way that supports their preconceptions and fits their thinking.
Cognitive dissonance	People experience psychological tension when they realize that they engage in behaviours inconsistent with the type of person they would like to be.
Memory bias	What and how one remembers things is never objective.

Self-Efficacy	Self-efficacy combines a person's objective capability to perform a change and her belief about this ability. Positive self-efficacy is a necessary precondition to taking steps towards new practices.
Agency	The sense of control a person feels toward an action and its consequences.
Support	The availability of trusted relatives or friends to encourage, aid and protect someone when needed.
Confidence	A person's belief that she can succeed in creating change; feeling of trust in one's own ability.
Skills	Particular abilities and capacities to do something. Most skills are acquired through experience and/or deliberate learning.
Decision autonomy	The ability to make one's own decision.
Cognitive biases	Limited or bounded rationality refers to this characteristic of human cognition that it is restricted in its resources (thinking capacity, available input information, and the amount of time allotted).
Present bias	People generally favour a smaller gain in the short run over a larger gain in the future, even sometimes consciously when considering trade-offs.
Procrastination	Putting off decisions can be explained by the desire to use the present time for more satisfying actions, or by the complexity of making a change. In both cases, emotions are taking over and we forget about the longer-term plan, despite the cost of delayed action.
Hassle factors	Minor inconveniences that prevent people from acting.
Intent	The readiness to change is the factor at the centre of the individual change process.
Contemplation	Stage where a person is conscious of both the problem and option for change, and is considering switching to the new practice, but still has not acted.
Physical Capability	Strength and ability to perform essential physical actions.
Fatigue	Being tired (and hungry) depletes cognitive resources and significantly affects our decision-making.
External factors	As relevant to the problem at hand and local context.
Opportunity	Opportunity refers to the external factors which make the execution of a particular behaviour possible.
Social opportunity	Opportunities as a result of social factors, such as cultural norms and social cues.
Social Influence	Social influence is primarily based on the attitudes and behaviours of those whose opinion we value the most, who we consult regarding certain issues, and those whose perception of us matters.
Reference network›s attitudes and behaviours	Social influence is primarily based on the attitudes and behaviours of those whose opinion we value the most, who we consult regarding certain issues, and those whose perception of us matters. Members of this "reference network" include family and peers as well as influencers and role models who exert some form of influence over us. People tend to imitate the behaviours of their reference network frequently, and sometimes automatically.

Injunctive norms / Normative expectations	A rule of behaviour that people engage in because they think others in their group expect them to do so.
Descriptive norms / Empirical Expectations	Social influence is primarily based on the attitudes and behaviours of those whose opinion we value the most, who we consult regarding certain issues, and those whose perception of us matters.
Social pressure	Several social norms exist because of the consequences of behaving in certain ways (anticipated opinion or reaction of others). What defines these norms is the social 'obligation' behind them and people's belief that compliance will condition their acceptance or rejection by the group.
Social identity	Complying with norms can be driven by an individual's desire to belong to the group and manifest affiliation, even in the absence of actual sanctions.
Community Dynamic	Community dynamics lay central roles in the creation and maintenance of a social network and the behaviors of individuals forming it.
Collective self-efficacy	The confidence of community members that together they can succeed. This includes the perceived capability of other community members.
Sense of ownership	The degree to which community members think the problem is important, perceive themselves as contributing to and responsible for the success of the collective change, and think they will benefit from the results.
Social cohesion	The sense of belonging and feeling part of the group; the extent to which community members want to cooperate to solve collective issues; the level of interconnection between community members (density of the social network); the level of division into factions; and the level of trust for other members.
Quality of leadership	The existence of effective leadership is necessary to steer the group in the right direction and sustain the community development process. A 'good' leader will be popular and trusted, supportive of dialogue and change, innovative, and foster inclusion.
Trigger / Stimulus	Community dynamics usually stem from a triggering factor, including the emerging alternatives we describe below, but also from more exogenic factors, such as the visit or interest of external agents of change, who can be from civil society, authorities or the international cooperation.
Meta Norms	Meta-norms are underlying ideologies and unwritten rules, deeply entrenched in people's culture and identity, cutting across sectors and conditioning a large number of behaviours. These meta-norms have a direct and strong influence on individual drivers.
Gender ideologies	Gender roles are expressed at all levels and in all segments of society, and are reproduced through daily interactions. Concepts of masculinity and femininity are underlying ideologies translating into behavioural expectations for men, women, girls and boys.
Family roles and relationships	Social norms related to what it means to be a grandparent, an elder sibling or a mother or father, and to how spouses communicate between themselves and interact with their children are important drivers of behaviours.
Legal compliance	The enforcement of laws and regulations does not only rely on formal organisms: the respect of these rules requires a social norm of legal obedience.
Social opportunity	Opportunities provided by the environment, such as time, location and resource.

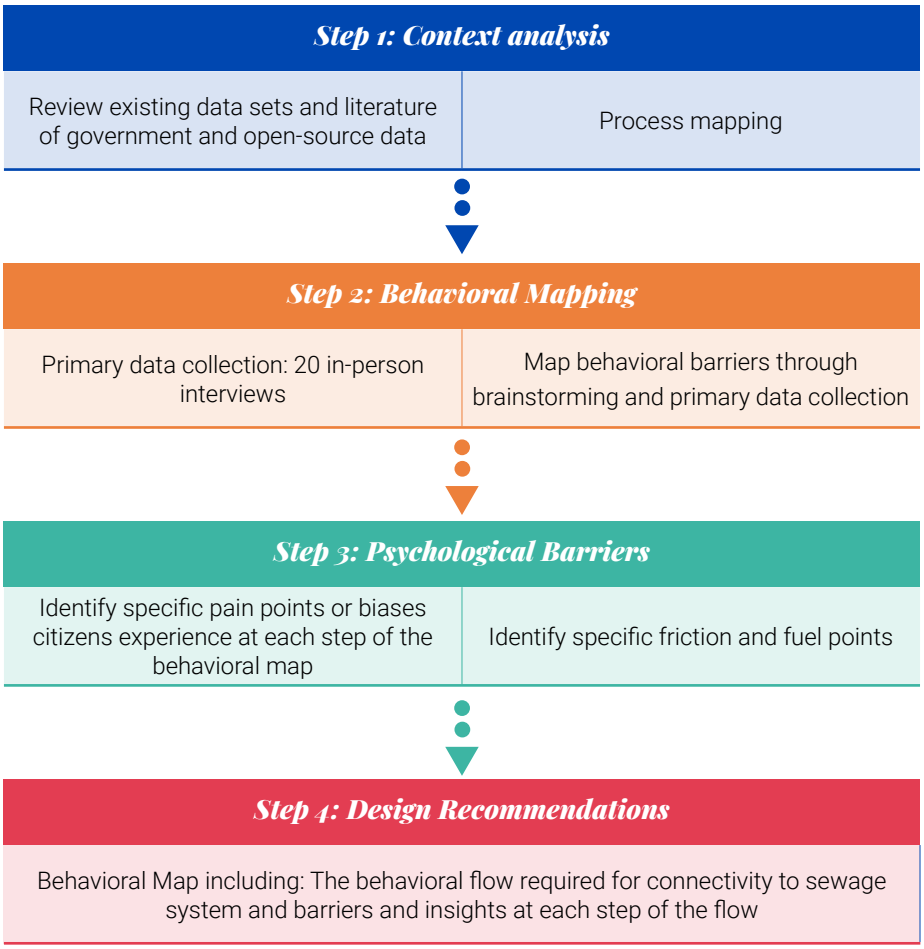
Communications Environment	The information, opinions, arguments, and stories we are exposed to have a significant role in shaping our attitudes and interests, and down the line our behaviors. This communication environment is formed by multiple channels and sources.
Factual / scientific information	The availability, accessibility and dissemination of accurate and unbiased knowledge about the issue and practices at hand; understandable evidence conveyed without feelings or opinions about it.
Word of mouth	In advertising and marketing, word of mouth refers to the phenomenon that occurs following the introduction and ascendancy of a product or subject matter that has attracted the attention of a certain number of individuals.
Governing Entities	Institutions, ruling bodies, socio-political or armed groups try to structure and organize society through various forms of peaceful or violent interactions with the population in an attempt to control them.
Policies and regulations	Set of principles and rules established by the authorities to regulate how people behave in society, which may prompt the community and its members to act and change.
Enforcement / Security Apparatus	System enforcing the observance of law and order (justice, criminal and police systems), and in conflict situations, elements of control and repression.
Fiscal measures and incentives	The use of taxes, expenditures, or direct incentives to influence people's actions and achieve social, economic and political objectives.
Recognition of the issue	The extent to which the authorities acknowledge the existence of a problem and are willing to act upon it.
Structural Drivers	Structural barriers are bottlenecks that are not related to people's willingness to change, or the legal and social environment, but often link to infrastructure, services and types of livelihoods, and are commonly consequences of poverty and underdevelopment.
Trust in service providers	A critical condition for people to use services is trust in the person or entity providing them.
Infrastructure	Existence and usability of facilities, roads, water and sewage systems, electrical grids, phone, Internet, etc.
Living conditions	The circumstances of a person's life, such as geographic isolation, living in an active conflict zone, in areas with high criminality rates or even being incarcerated amongst other factors, are often strong barriers to adopting new practices. Lack of access to a job market, to food supplies or other basic needs plays a similar role.
Access and quality of services	The demand for services cannot always be appropriately met for several reasons regarding their provision or impaired access.
Traditional Services	Existence and accessibility of alternative and traditional services, where behaviours considered harmful could be practiced and even encouraged.
Motivation	Motivation refers to the internal processes which influence our decision making and behaviours.
Automatic motivation	Automatic processes, such as our desires, impulses and inhibitions.
Interest	Interest characterizes how sympathetic people are to an alternative practice, how much they want to know about it, be involved in activities around it, or try it out.

Appeal	Characterizes how attractive something is on a more emotional level.
Reflective Motivation	Reflective processes, such as making plans and evaluating things that have already happened.
Attitude	An attitude is what someone thinks or feels about something. Mixing cognitive and emotional elements, attitude defines people's predisposition to respond positively or negatively to an idea, a situation, or a suggested change.
Beliefs	Convictions of what is true. Beliefs are individual, but highly influenced by others. The probability of one person adopting a belief increases with the number of people already holding that belief.
Values	What we perceive as good, right or acceptable, including our inner convictions of right and wrong, and of what good conscience requires. Individual values are directly influenced by moral norms, and can be liberal or conservative.
Aspirations	Personal goals and dreams, vision for future-self and hopes and ambitions for achieving things.
Past Experiences	Researchers have shown that past experience helps form complex decisions. Memories of experiences, such as past failure and frustration with a behaviour, or negative experiences such as poor treatment by a service provider, will shape our attitude towards trying new things.
Emotions	Emotions are generated subconsciously and are designed to appraise and summarize an experience and inform action. It is a feeling process in which cognitive, physiological and behavioural reactions come together to respond to a stimulus.
Interest	Interest characterizes how sympathetic people are to an alternative practice, how much they want to know about it, be involved in activities around it, or try it out.
Attention	When people are informed and paying attention to what is suggested.
Potential Gains / Avoided Losses	The benefits that the person thinks she might get from change, especially in the short term.
Affordability	The extent to which a person considers a change of practice to be within her financial means, combining costs and possible monetary incentives.
Efforts Needed	How practical and easy the change to a new behaviour is. The difficulty is not proportional to the likelihood of adoption.

Research Process

In order to design the qualitative behavioral diagnosis, MAGENTA used a mixed-methods approach, analyzing secondary and primary data.

The following workflow represents the research process and details the different stages.



Data sources

This study uses primarily qualitative methods with primary and secondary data sources. It is important to note that the results from the initial behavioral diagnosis will also be complemented by a quantitative baseline study.

This study aims to extract deeper, nuanced behavioral insights that can be used to shape specific messaging strategies and nudge interventions.

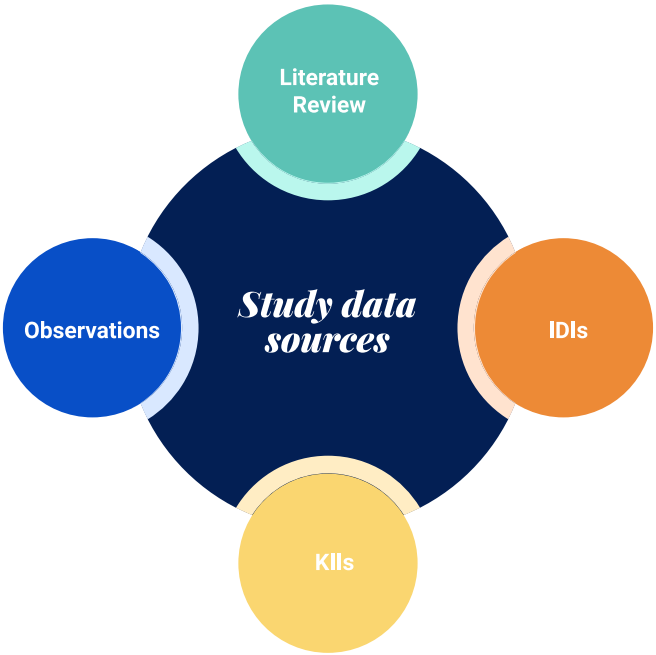
The data sources for the diagnosis were:

Secondary Data Sources:

- 5 key informant interviews (KIIs) with ESSAP officials, IDB experts, and the local government
- Literature review

Primary Data Sources:

- 20 x in-depth interviews (IDIs) with connected and not connected households
- Observations in the household and in the process to connect



Sample distribution

This is the sample distribution for the Key Informant Interviews (KIIs) with the IDB and ESSAP (Table 2), and the sample distribution for the in-depth Interviews (IDIs) with households in Fernando de la Mora, Área Metropolitana de Asunción (Table 4).

KIIs Sample distribution

Step 1: Context analysis	*Number*
IDB Official	1
IDB Quantitative Researcher	2
ESSAP	1
Fernando de la Mora government officer	1
Total	5

Table 3. KIIs sample distribution

IDIs Proposed Sample

Variables	Zona Norte Lote: Consorcio Katupyry Lote: Consorcio Norte	Zona Sur: Lote: Consorcio Pitiantuta	Total
Connected	3	2	5
Not Connected	10	5	15
Total	13	7	20

Table 4. IDIs proposed sample

Primary Sample Unit = households that are:

1. Not connected to the network / Connected to the network
2. Located in one of the three areas of the program
3. Are homeowners or decision makers

IDIs Actual Sample

There was a minor change in the sample from the Zona Norte because it proved difficult to find households in that area that were not connected to the sewage network. The citizens from this area report that most of their neighbors are connected.

Variables	Zona Norte Lote: Consorcio Katupyry Lote: Consorcio Norte	Zona Sur: Lote: Consorcio Pitiantuta	Total
Connected	3	2	5
Not Connected	9*	6	15
Total	12	8	20

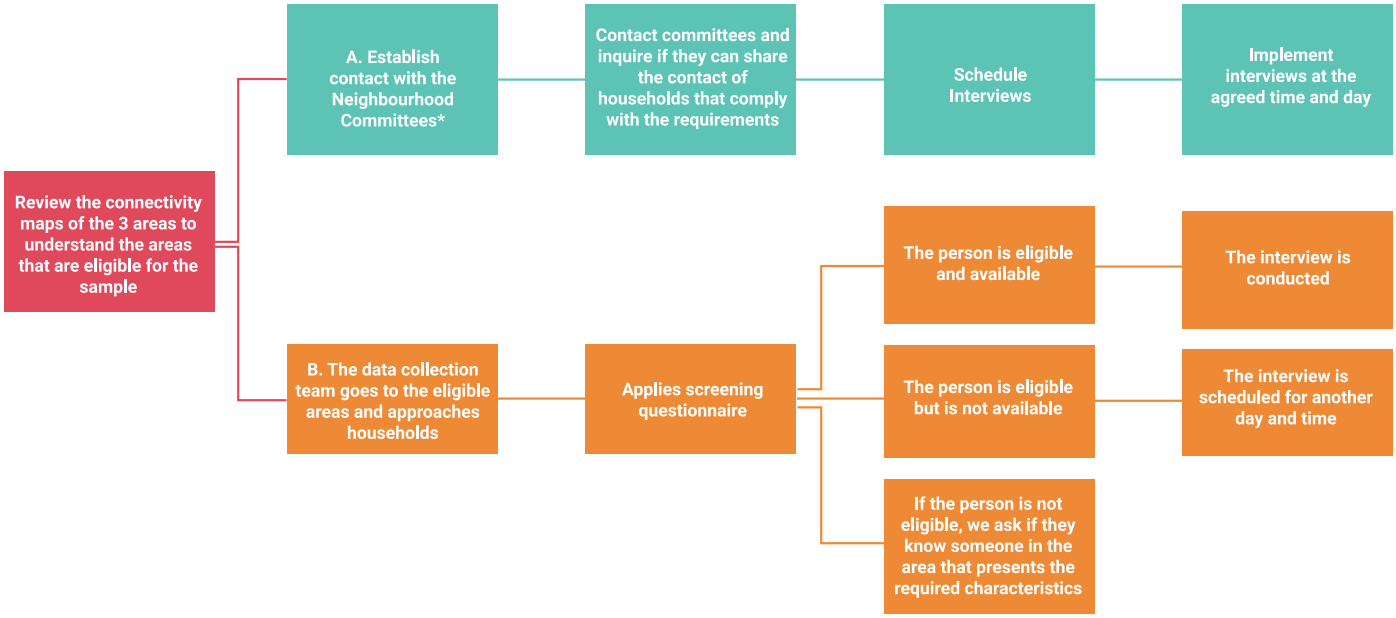
Table 5. IDIs actual sample

*One of the interviews at Zona Norte took place outside of the area of the sewage connectivity network. This happened because the residents of the neighborhood were under the impression that they were part of the sewage network, and had received an offer from the construction workers to connect. The interview provided valuable insights into the perceived barriers that the residents faced and was therefore deemed to be valid and worthwhile for the study.

Process to identify and contact the sample

The following diagram explains MAGENTA's process to identify and contact the sample to implement the IDIs with households in Fernando de la Mora.

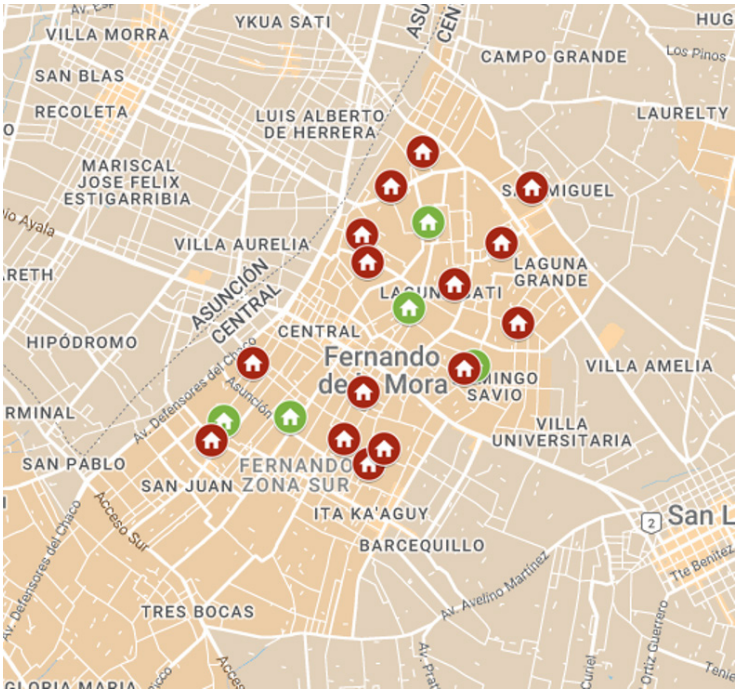
Option A, which involved obtaining the contact information of neighborhood committees from the municipality, was not successful in collecting data for the study. Despite having the necessary information, the residents did not respond to the WhatsApp messages or declined to participate in the interviews. As a result, the data collection team had to resort to Option B, which entailed using alternative methods to gather information. This switch was necessary as the primary objective was to gather reliable and comprehensive data to support the study.



Demographic information of the sample

Participant	Age	Gender	Education	Household Income	Household Size	Connection to sewage	Location	Presence of children	Ownership of house
1	65+	Female	Primary School	0 -1 minimum wage	3 -5 people	Connected	Zona Norte	1 - 2 Children	Home owner
2	65+	Female	University	1-2 minimum wages	3 -5 people	Connected	Zona Norte	0 Children	Home owner
3	65+	Female	Primary School	1-2 minimum wages	1-2 people	Connected	Zona Norte	0 Children	Home owner
4	41 -65	Female	University	2 -3 minimum wages	3 -5 people	Connected	Zona Sur	1 - 2 Children	Home owner
5	41 -65	Female	Secondary School	1-2 minimum wages	5 -7 people	Connected	Zona Sur	1 - 2 Children	Home owner
6	41 -65	Male	Secondary School	0 -1 minimum wage	5 -7 people	Not Connected	Zona Norte	1 - 2 Children	Home owner
7	41 -65	Male	Primary School	0 -1 minimum wage	3 -5 people	Not Connected	Zona Norte	0 Children	Home owner
8	65+	Female	Primary School	0 -1 minimum wage	1-2 people	Not Connected	Zona Norte	0 Children	Home owner
9	41 -65	Female	High School	Not Applicable	3 -5 people	Not Connected	Zona Norte	0 Children	Home owner
10	65+	Female	Primary School	0 -1 minimum wage	1-2 people	Not Connected	Zona Norte	0 Children	Home owner
11	65+	Male	Secondary School	1-2 minimum wages	3 -5 people	Not Connected	Zona Norte	0 Children	Home owner
12	65+	Female	Primary School	Not Applicable	1-2 people	Not Connected	Zona Norte	0 Children	Home owner
13	31-40	Female	High School	3 - 4 minimum wages	5 -7 people	Not Connected	Zona Norte	3 - 4 Children	Tenant
14	41 -65	Male	Secondary School	2 -3 minimum wages	More than 7	Not Connected	Zona Norte	1 - 2 Children	Home owner
15	41 -65	Female	Secondary School	1-2 minimum wages	3 -5 people	Not Connected	Zona Sur	0 Children	Home owner
16	41 -65	Male	University	Not Applicable	3 -5 people	Not Connected	Zona Sur	0 Children	Home owner
17	31-40	Male	Secondary School	0 -1 minimum wage	1-2 people	Not Connected	Zona Sur	0 Children	Home owner
18	41 -65	Female	University	0 -1 minimum wage	3 -5 people	Not Connected	Zona Sur	0 Children	Home owner
19	41 -65	Male	Primary School	0 -1 minimum wage	5 -7 people	Not Connected	Zona Sur	1 - 2 Children	Home owner
20	41 -65	Female	University	3 - 4 minimum wages	3 -5 people	Not Connected	Zona Sur	0 Children	Home owner

Geographic distribution of the sample



Link to access the map:

https://www.google.com/maps/d/viewer?mid=1IjNqRZPM1WgzvVq-nUdep3eEzAUh7iRk&ll=-25.31983956945342%2C-57.54965277777779&z=14

Data Collection Tools

Data collection tools	
Tool	***Description***
1. In-depth interview guide	MAGENTA developed an interview guide to last no more than 40 minutes, designed to help identify the specific behavioral steps in reaching connectivity. The guiding questions were derived from the high-level research questions lined to the COM-B analytical framework. Importantly the guide digs deep and is complementary to the quantitative study currently being implemented. The tool was developed in Spanish, collaborating with IDB and ESSAP stakeholders. Interview guides were adapted to include different questions depending on the participant's segment according to the sample.
2. Observation Guide	MAGENTA developed an observation guide that our field researchers used to note observations within the household related to infrastructure. The guide also explored the real experience of connecting to the sewage network.

Data Collection Protocols

Moderator Training

MAGENTA's field researcher was thoroughly trained in utilizing the tool and will conduct the 20 interviews in person. The training was conducted in person by MAGENTA's Team Lead. The training focused on practicing how to dig deep in qualitative interviews and ask good follow-up questions. The training also covered issues of quality assurance and ethics.

Data Collection

Data collection was conducted by MAGENTA's Team Lead and our field researcher. Where possible, interviews were recorded, and detailed notes were provided in.

Quality Assurance

Transcripts and audio recordings are available for the interviews. The first two interviews were conducted by MAGENTA's Team Lead, with our field researcher observing to ensure a strong understanding of the data collection process. Subsequently, MAGENTA's Team Lead reviewed the audio recordings of the first two interviews conducted by our field researcher and provide feedback, looking out for non-response rates and other quality issues. We decided to work with female researchers to increase access to family households in Asunción while providing reassurance to the female heads of household.

Ethical Considerations

MAGENTA follows a do no harm and safeguarding approach.

Data Protection

MAGENTA anonymized interview data and ensure the safe storage, sharing, and processing of the data. These considerations refer to the General Data Protection Regulation (GDPR) and include informed consent given by participants, privacy protection, confidentiality, voluntary participation, and anonymity of respondents.

Annex 2: Data collection tools

Preguntas de preselección

Introducción

¡Hola! Me llamo _____. Soy parte de MAGENTA. Actualmente estamos apoyando al Banco Interamericano de Desarrollo para comprender algunos de los desafíos que enfrentan los ciudadanos para poder conectarse a la red de alcantarillado en Fernando de la Mora, Asunción. ¿Me permite hacerle algunas preguntas iniciales para definir su elegibilidad para participar?

1. Propiedad del inmueble

¿Es usted propietario/a del inmueble en donde vive?

a. Sí

b. No

*Si responde SI, pasar a la pregunta de Ubicación y continuar con la entrevista.

*Si responde NO pasar a la pregunta 2 o preguntar si la persona propietaria se encuentra en casa o se puede agendar una entrevista con ella esta semana.

2. Tomadora de decisiones

¿Es usted la/el principal tomador/a de decisiones sobre el inmueble en donde vive? (¿la persona que toma decisiones sobre gastos importantes o reformas del hogar?)

a. Sí

b. No

*Si responde NO, darle las gracias y no continuar con la entrevista. Continuar a la siguiente casa.

3. Ubicación del inmueble

*La persona encuestadora responde esto. En caso de tener duda, preguntar.

¿En dónde está ubicado el inmueble?

a. Zona Norte

b. Zona Sur

4. Conexión del inmueble

¿Su hogar está conectado y utiliza el servicio de alcantarillado?

a. Sí

b. No

*Si responde SI, proceder al cuestionario para personas conectadas.

*Si responde NO, proceder al cuestionario para personas conectadas

5. Disponibilidad y disposición para participar en la entrevista

*Explicar las características de la entrevista. Duración y propósito. En caso de no estar disponible en ese momento, agendar para otro día.

¿Está usted disponible para participar en la entrevista?

a. Sí

b. No

*Si responde SI, continuar con el cuestionario.

*Si responde NO, darle las gracias y no continuar con la entrevista.

Guía de entrevistas – hogares conectados

Presentación general

Hola! Me llamo _____. Soy parte de MAGENTA. Actualmente estamos apoyando al Banco Interamericano de Desarrollo para comprender algunos de los desafíos que enfrentan los ciudadanos para poder conectarse a la red de alcantarillado en Fernando de la Mora, Asunción.

Como parte de la etapa inicial del proyecto, estamos realizando algunas entrevistas con habitantes de Fernando de la Mora para comprender mejor las causas y los desafíos en torno a los comportamientos relacionados a la conectividad a la red de alcantarillado. Para nosotras es muy importante conocer su perspectiva del tema.

Antes de comenzar, me gustaría compartir información importante con usted:

Formato

Para esta entrevista se le harán ocho preguntas generales sobre distintas temáticas (acceso a la información de ESSAP, proceso de conectividad, infraestructura, beneficios, dinámicas comunitarias), y se harán algunas preguntas de seguimiento para profundizar sobre ellas.

Confidencialidad

Es importante mencionar que, en esta sesión puede sentirse en confianza de expresarse libremente, buscamos aprender de su perspectiva y conocer su opinión en torno a la conexión al alcantarillado en Fernando de la Mora. La información que nos proporcione es totalmente anónima.

Permiso para grabar

Por último, quiero comentarle que nos gustaría grabar esta entrevista para poder consultarla después de manera interna en el equipo. La grabación quedará guardada de manera segura en los archivos de MAGENTA y es completamente confidencial. ¿Está de acuerdo con que la grabemos?

EMPEZAR A GRABAR

Ficha de entrevista

Este campo lo llena la persona encuestadora antes o después de la entrevista.

Número de entrevista	
Coordenadas	
Hora de inicio	
Hora de fin	

Demografía

Nombre de la persona entrevistada	
¿Me puede decir su nombre completo por favor?	
Dirección	
¿Cuál es su dirección completa?	
Género	
¿Con qué género se identifica?	
Edad	
¿Qué edad tiene?	
Nivel de educación	
¿Cuál es el último nivel escolar que cursó?	
Ocupación	
¿Cuál es su ocupación?	
Nivel socioeconómico	
En caso de que se sienta cómoda/ cómodo compartiendo, nos podría decir ¿cuál es el ingreso promedio mensual del hogar? *Si la persona prefiere, puede decirnos el ingreso de las diferentes personas que habitan en el hogar y se hace el cálculo después.	
Composición familiar	
¿Considerándose a usted mismo, cuántas personas viven en este hogar?	
¿De estas personas, cuántas son menores de 13 años?	
¿De estas personas, cuántas están entre los 13 y los 18 años?	
¿Cuántas personas son mayores de 18 años?	
¿Cuántas personas son mayores de 60?	
Propiedad de la casa	
A. ¿Es propietaria/propietario del hogar? B. ¿Es alquiler	
A. ¿Desde hace cuánto es propietario? B. ¿Desde hace cuánto alquila?	

Observaciones del hogar

Este campo lo llena la persona encuestadora de acuerdo con las observaciones del hogar.

Características del hogar	***Notas***
Material de construcción	
Material de techo	
Electricidad	
Electrodomésticos (Licuadora, Horno eléctrico, Microondas, Lavadora de ropa)	
Cocina con estufa de gas	
Tipo de piso: cerámica, tierra, madera	
Vehículos: auto, motocicleta, bicicleta	
Basura desechada en basurero	
Televisión (Visible)	
Radio	

Guía de entrevistas

La persona entrevistadora hará las preguntas guía y conforme la persona entrevistadora responda, se utilizarán las preguntas para profundizar.

1. **¿Me podría contar qué sabe sobre el sistema de alcantarillado en Fernando de la Mora?**

¿Cuánto tiempo lleva disponible el servicio en la zona?

¿Cuál es el proceso que las personas deben de seguir para conectarse?

¿Cómo accede a la información de la ESSAP? ¿Tiene acceso a internet?

2. **¿Me podría explicar detalladamente cuál fue el proceso que siguió con la ESSAP para conectarse al sistema? - Desde que se entero hasta que logró la conexión?**

¿Cómo se enteró que se podía conectar?

¿Cuáles fueron los requisitos para conectarse?

¿Tuvo que acudir a las oficinas?

¿Tuvo acceso a recursos de transporte y tiempo para poder llevar a cabo el proceso?

¿Quién tomó la decisión de conectarse? ¿Fue una decisión fácil? ¿Fue una decisión rápida?

3. **¿En el nivel hogar, ¿Cuál fue el proceso para conectarse? ¿Tuvo que hacer arreglos en la casa?**

Si tuvo que hacer arreglos, ¿qué tipo de arreglos? / ¿Dónde se encontraba el pozo ciego/fosa séptica/Cloaca?

¿Fue fácil conseguir a un plomero?

4. **Percibe que conectarse al sistema de alcantarillado fue caro? ¿Qué costos ha implicado para su hogar?**

¿Cuál es el costo de derecho a la conexión? (único costo) / ¿Cuánto costó conectar su hogar al sistema de alcantarillado? (tendido de cañerías, cámara intradomiciliaria, plomeros, etc) – Costos de la ESSAP

¿Cuánto costaron las adecuaciones o arreglos necesarios al baño? (cambio de pisos, cambio de artefactos sanitarios, etc.)

¿Cuál es el costo del servicio mensual?

¿El costo fue mayor o menor a lo que esperaba?

¿Cómo financió este costo? (Por ejemplo: gastó sus ahorros, pidió dinero prestado, etc.)

5. **¿Cuáles son las razones que le llevaron a quererse conectar al sistema de alcantarillado?**

¿Hubo algún incentivo/motivación específica para que tomara esta decisión?

¿Si no estuviera conectada/o al sistema de alcantarillado, qué otras alternativas existen?

¿Alguien de la comunidad influyó en su decisión de conectarse al sistema de alcantarillado? ¿Quién? ¿Por qué?

6. **¿Cree que el haber conectado su vivienda al sistema de alcantarillado tiene beneficios? ¿Cuáles?**

¿Qué diferencias percibe sobre estar conectado al sistema de alcantarillado o no?

¿Qué beneficios identifica salud/sociales/económicos?

¿Sabe si existe algún beneficio ambiental de conectarse al alcantarillado?

7. **¿Qué opinan sus vecinas y vecinos sobre su decisión de conectarse al sistema de alcantarillado?**

¿Conoce a alguien más de la zona que esté conectado?

¿Cree que las demás personas en su barrio también se están conectando?

¿Cuántas personas de su barrio cree que estén conectadas?

¿Usted diría que la mayoría o la minoría de las personas en su barrio están conectadas?

¿Considera importante que otras personas en su barrio también se conecten?

¿Percibe que el barrio tiene preferencia hacia que los hogares de la zona estén conectados o no estén conectados? ¿Cree que los otros sistemas de saneamiento están igual de aceptados que el alcantarillado?

¿Cree que la conexión al alcantarillado se volverá algo común en el barrio? ¿Por qué sí o por qué no?
¿Cree que otras personas perciban que conectarse es algo bueno para el hogar?

8. **¿Está satisfecho/a con su decisión de haberse conectado? ¿Lo recomendarías a una vecina o vecino?**

¿Qué factores cree que harían que sus vecinos/vecinas se conecten?
¿Qué le recomendaría a alguien que tiene la intención de conectarse?

9. **¿Hay algo más que quiera agregar?**

NOTAS:

Hacer las anotaciones registrando el número de la pregunta.

Guía de entrevistas – hogares no conectados

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EMPEZAR A GRABAR

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¿Cuál es su ocupación?	
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Cocina con estufa de gas	
Tipo de piso: cerámica, tierra, madera	
Vehículos: auto, motocicleta, bicicleta	
Basura desechada en basurero	
Televisión (Visible)	
Radio	

Guía de entrevistas

La persona entrevistadora hará las preguntas guía y conforme la persona entrevistadora responda, se utilizarán las preguntas para profundizar.

1. **¿Me podría contar qué sabe sobre el sistema de alcantarillado en Fernando de la Mora?**

¿Cuánto tiempo lleva disponible el servicio en la zona?

¿Conoce cuál es el proceso que las personas deben de seguir para conectarse?

¿Alguna vez ha intentado conectarse al alcantarillado, pero no ha terminado el proceso?

¿Cuáles fueron las dificultades que encontró?

Solo si mencionan a Essap - ¿Cómo accede a la información de la ESSAP? ¿Tiene acceso a internet?

2. **¿Sabe cuál es el proceso para conectarse a la red de alcantarillado? ¿Podría explicármelo?**

¿Cómo se enteró que existe el servicio?

¿Conoce los requisitos para conectarse?

¿Necesita recursos de transporte y tiempo para poder llevar a cabo el proceso? ¿Los tiene?

¿Quién en su hogar tomaría la decisión de conectarse o no conectarse? ¿Por qué esa persona?

3. **¿Si quisiera conectarse a la red de alcantarillado - sabe si tendría que hacer alguna obra en su hogar?**

¿Sabe en dónde está la boca/entrada para conectarse?

¿Qué tipo de arreglos?

¿Cuánto costarían los arreglos necesarios (tendido de cañerías, cámara intradomiciliaria, plomeros, etc)?

¿Cómo financiaría este costo? (Por ejemplo: gastó sus ahorros, pidió dinero prestado, etc.)

¿Es fácil conseguir a un plomero?

4. **¿Cree que conectarse al sistema de alcantarillado es caro? ¿Qué costos implicaría para su hogar?**

¿Sabe si tiene que cubrir algún costo por la conexión? ¿Cuál es ese costo?

¿Cuál es el costo del servicio mensual? ¿Lo está pagando actualmente?

¿Cuál es el costo de derecho a la conexión? (único costo)

5. **¿Cuáles son las razones por las que no se ha conectado al alcantarillado?**

¿Cuál es el sistema actual que tiene para manejar sus desechos?

¿Cuáles cree que son las diferencias sobre estar conectado al sistema de alcantarillado o no?

¿Existe algún incentivo/motivación específica que la/lo llevaría a tomar esta decisión?

¿Alguien de la comunidad le ha hablado sobre conectarse al sistema de alcantarillado? ¿Quién? ¿Podría influir en su decisión? ¿Por qué?

¿Ha hablado alguien de ESSAP con usted sobre conectarse al alcantarillado? ¿Esto ha influido de alguna manera en su perspectiva sobre la conexión? ¿Qué más necesita para conectarse?

6. **¿Cree que conectar su vivienda al sistema de alcantarillado tiene beneficios? ¿Cuáles?**

¿Qué beneficios del hogar/sociales/económicos identifica?

¿Sabe si existe algún beneficio ambiental de conectarse al alcantarillado?

7. **¿Qué opinan sus vecinas y vecinos sobre su decisión de conectarse al sistema de alcantarillado?**

¿Conoce a alguien más de la zona que esté conectado?

¿Cree que las demás personas en su barrio también se están conectando?

¿Cuántas personas de su barrio cree que estén conectadas?

¿Usted diría que la mayoría o la minoría de las personas en su barrio están conectadas?

¿Considera importante que otras personas en su barrio también se conecten?

¿Percibe que el barrio tiene preferencia hacia que los hogares de la zona estén conectados o no estén conectados? ¿Cree que los otros sistemas de saneamiento están igual de aceptados que el alcantarillado?

¿Cree que la conexión al alcantarillado se volverá algo común en el barrio? ¿Por qué sí o por qué no?

¿Cree que otras personas perciban que conectarse es algo bueno para el hogar?

8. **¿Está satisfecho/a con su sistema de manejo de desechos actual? ¿Quisiera conectarse al sistema de alcantarillado?**

¿Cree que debe de conectarse al sistema?

9. **¿Hay algo más que quiera agregar?**

NOTAS:

Hacer las anotaciones registrando el número de la pregunta.

Guía de observación

El/la entrevistador/a realizará un ejercicio de observación para obtener una mejor perspectiva sobre el proceso que las y los ciudadanos de Fernando de la Mora deben llevar a cabo para acceder al servicio de conectividad al alcantarillado proporcionado por ESSAP. El/la entrevistador/a deberá buscar la información para acceder al servicio de ESSAP a través de los siguientes medios:

1. **Internet**
2. **Línea telefónica de ESSAP**
3. **Oficinas de ESSAP**

Internet

Internet		
Observación	***Checklist***	***Notas***
¿La información disponible en la página de internet de ESSAP es adecuada para acceder al servicio?		
¿Se pueden tomar pasos para iniciar el proceso en la página de internet de ESSAP?		
¿La información disponible en la página de internet de ESSAP es clara?		
¿La información disponible en la página de internet de ESSAP está completa?		
¿La información disponible en la página de internet de ESSAP es directa?		
¿La información disponible en la página de internet de ESSAP es fácil de comprender?		
¿La información disponible en la página de internet de ESSAP es fácil de buscar?		
¿La plataforma es amigable para el usuario?		
¿Cuántos clics / tiempo toma para las personas llegar a la información sobre la conectividad?		

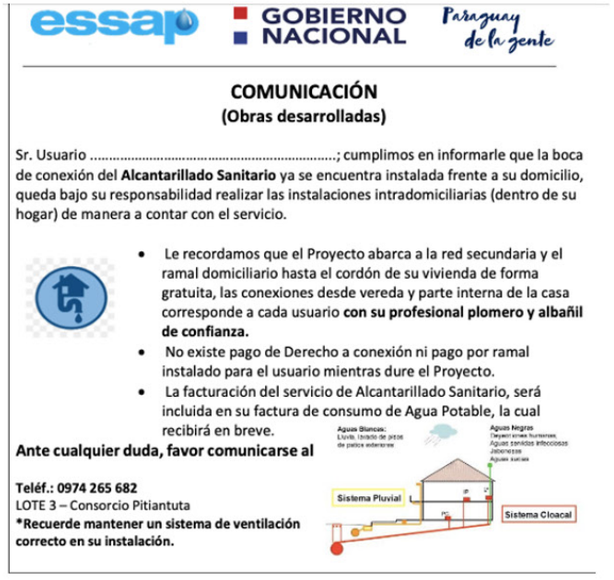
Línea telefónica de ESSAP

Línea telefónica de ESSAP		
Observación	***Checklist***	***Notas***
¿Es fácil llamar a la línea telefónica de ESSAP?		
¿Cuánto es el tiempo de espera?		
¿El personal le da seguimiento a la solicitud de información?		
¿La información que proporcionan está actualizada?		
¿Sugieren acudir a otras fuentes de información?		
¿Las instrucciones del personal fueron claras?		

Oficinas de ESSAP

Oficinas de ESSAP		
Observación	***Checklist***	***Notas***
¿Es fácil llegar a las oficinas de ESSAP?		
¿Cuánto es el tiempo de espera?		
¿El seguimiento a la solicitud de información es personalizado?		
¿Cuál es la actitud del personal de ESSAP?		
¿Sugieren acudir a otras fuentes de información?		
¿La información que proporcionan está actualizada?		
¿Hay material informativo disponible?		
¿La gente en las oficinas pide información sobre los servicios de ESSAP?		

Annex 3: ESSAP's Communication Materials



essap GOBIERNO NACIONAL Paraguay de la gente

COMUNICACIÓN
(Obras desarrolladas)

Sr. Usuario .....; cumplimos en informarle que la boca de conexión del **Alcantarillado Sanitario** ya se encuentra instalada frente a su domicilio, queda bajo su responsabilidad realizar las instalaciones intradomiciliarias (dentro de su hogar) de manera a contar con el servicio.

- Le recordamos que el Proyecto abarca a la red secundaria y el ramal domiciliario hasta el cordón de su vivienda de forma gratuita, las conexiones desde vereda y parte interna de la casa corresponde a cada usuario **con su profesional plomero y albañil de confianza.**
- No existe pago de Derecho a conexión ni pago por ramal instalado para el usuario mientras dure el Proyecto.
- La facturación del servicio de Alcantarillado Sanitario, será incluida en su factura de consumo de Agua Potable, la cual recibirá en breve.

Ante cualquier duda, favor comunicarse al

Teléf.: 0974 265 682
LOTE 3 – Consorcio Pitiantuta
***Recuerde mantener un sistema de ventilación correcto en su instalación.**