CHOLOMA

A Safety Analysis Report

SAFETIPIN
Supporting Safer Cities

Introduction

According to the Honduras 2015 Crime and Safety report, Honduras has one of the highest murder rates in the world. Incidents of extortion, harassment and abduction are not uncommon in cities of Honduras where the women and children are most vulnerable to such incidents of violence. Most of the major cities of Honduras has higher homicide rates than the national average[1]. Public spaces and public transportation i.e. the buses and taxis are considered as unsafe for women in Honduras. This fear of violence in public spaces affects the everyday lives of women as it restricts their movement and freedom to exert their right as citizens of the city – freedom to move, study, work, and spend leisure time.

Creating a safe environment involves much more than just responding to violence. It is important to create the conditions by which women are able to move about safely and without fear of violence or assault. Fear often plays a key role in women's experience and access to the city. Therefore, in order to create greater levels of safety and comfort, both actual violence and the fear of violence need to be addressed. Research has shown that many factors play a role in determining women's access to the city, including urban design and planning, community involvement, improved policing, and usage of space. The question was how to gather that information to build safer cities.

Safetipin Technology

Safetipin, is a map-based mobile application and online platform, which works to make communities and cities safer by providing safety-related information collected by users and night time photographs. It uses the methodology of the safety audit as a tool to assess public spaces and perception of safety in those public spaces. The safety audits measures several parameters including infrastructure and the social usage of the space. The safety audit measures factors like lighting, signage, presence of people, presence of security, natural surveillance, maintenance of the place, the state of the sidewalk. Additionally, safety audits identify possible actions for change and build public awareness, ownership and commitment to implementing these actions at both the local and policy levels.

The Safetipin technology platform has two apps – My Safetipin, a crowd sourced tech platform that is used by volunteers and citizens to give data about their city and Safetipin Nite, a tool to collect night time pictures of the city. For this project, data has been collected through My Safetipin app only.

[1] *Honduras 2015 Crime and Safety Report, OSAC*

Project

For this project, Choloma Municipality was selected as the pilot as it's one of the most unsafe cities of Honduras. Choloma Municipality is part of Cortes, one of the 18 Departments of Honduras. As seen in the Map 1, Choloma Municipality has 41 administrative divisions or localities. The key stakeholders for this project are the Municipality of Choloma, UN Women, UNDP, UNICEF and local organisations.

My Safetipin app has been used to assess public spaces in Choloma for safety, both on infrastructure as well as social usage. The data has delineated why certain spaces are vulnerable by assessing infrastructural parameters as well as social usage by measuring women's feelings of safety at different places around the city. The collected data has been analysed in this report, and can used for actual on-ground responses and actions that will work towards improving safety for citizens on the streets and public spaces.

Objectives:

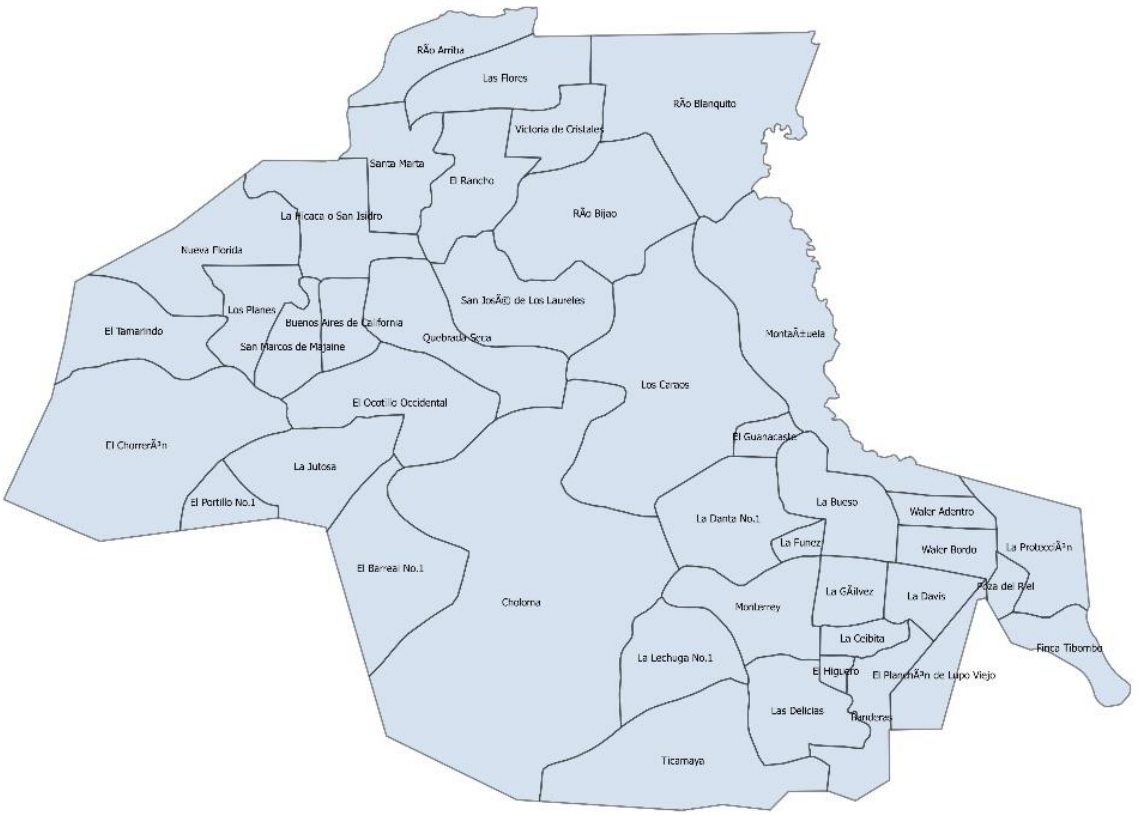
The two key objectives for this project are:

1. Capacity Building training of local organizations in Choloma

A two-day capacity building program with key stakeholders on how to use the app, how to analyze data for public policy and to develop an understanding of public spaces and violence against women. A training will also be held with volunteers on how to use the My Safetipin app.

2. Data Integration at the Local level

The data collected to be analyzed by the Safetipin team and made available through GIS layers maps, reports, tables and other formats. The raw data will also be made available to All the data collected at the local level will be integrated into the app platform and will be available both for analysis as well as visible on the app for usage by all citizens to understand safety concerns and make safer decisions while using public spaces.



Map 1 showing Choloma Municipality

Methodology

Safety audits are a participative methodology for exploring elements of public spaces that contribute towards creating safety or vulnerability. Usually, a safety audit is conducted by a group of people in a space with which they are familiar (e.g. a market, a neighbourhood street or a school yard). It is a simple process of walking through a space and assessing the factors that lead to unsafety/safety. The safety walks are conducted just after dark to see how public spaces are transformed at night. Essentially participatory in character, they identify both spaces that are unsafe and factors that cause exclusion. A fundamental belief is that if a space is made safe for women, it will be safe for everyone.

My Safetipin app is available for free on both Android and iOS App Store. At the core of the app is the Safety Audit. The audit is based on nine parameters – Lighting, Openness, Visibility, Crowd, Security, Walkpath, Availability of Public Transport, Gender Diversity and Feeling. Each parameter is rated 0/1/2/3 with 0 being Poor rating and 3 being Good. All parameters except Feeling are objective and are rated on the basis of a well-defined rubric. The rubric (as seen in Table 1) defines the rating for each of these parameters on a scale of 0-3. Except for Feeling all 8 parameters are objective. Feeling is the only subjective parameter. For rating feeling there is no rule. It can vary from individual to individual, male to female, able bodied to elderly etc.

For data collection through My Safetipin app, a team of volunteers (approx. 30 -50) is mobilized with the help of local organizations. Preferably more than 70% of the volunteers should be women. The volunteers need a smartphone or a tablet with an active internet connection and can work in pairs of groups if need be. These volunteers are then trained to use Safetipin app to conduct Safety Audits.

Shown in the images below are the step by step process of auditing a place based on the safety audit parameters. The first image shows the audit screen before an audit, the second image shows the audit screen after auditing a place and taking photographs and the third screen shows the audits done by a user as colour coded pins on the map. The red pins indicate unsafe locations, orange pins as moderately safe and green pins are the most safe places. The detailed process of conducting Safety Audit using My Safetipin app is listed in Annex 1.

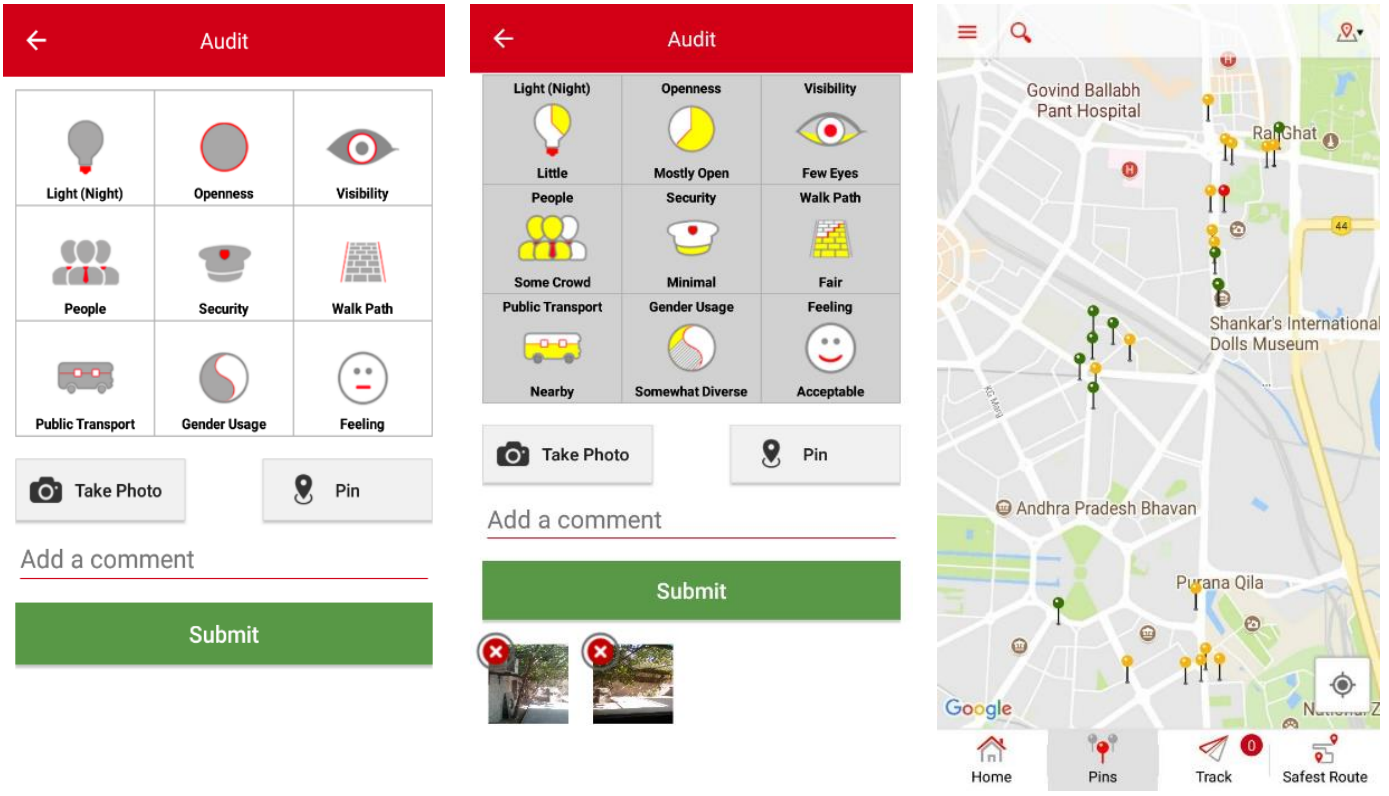


Image 1 showing the process of auditing a place

Audit Parameters

Lighting:

Lighting measures the amount of brightness/ illumination at a place and ranges from Dark to Bright (rating 0 -3). A place can be lit with street lighting or from other sources such as light coming from houses, shops, street vendors etc. Light coming from the vehicles is not considered as it is temporary.

Openness:

Openness refers to whether a person has a good line of sight in all directions.

Visibility:

The parameter visibility refers to how visible is one to others , i.e. can you be seen when on the street. It is based on the principle of 'eyes on the street'. i.e. can you be seen when on the street. This comprises windows- doors of shops, houses along with street vendors and hawkers.

Walkpath:

This parameter indicates whether a person can comfortably walk at a place. This refer to the quality of a pavement or space left for pedestrians along a road.

Security:

The parameter security refers to visible security offered either by the police or private security guards (for example along ATM/Bank).

Public Transport:

It refers to the ease of accessing any mode of public transport i.e. metro/bus/taxi etc. and is measured in terms of the distance to the nearest mode.

People:

People indicates the number of people around. This increases as a consequence of usage opportunities.

Gender usage:

Gender is about diversity i.e. the percentage of women and children amongst the crowd. This increases as a consequence of safety perception.

Feeling:

Feeling indicates one's perception of safety at that particular place or point. This can differ from person to person, male to female.

The Rubric

		0	1	2	3
1	Light (Night)	**None.** No street or other lights	**Little.** Can see lights, but there is low visibility in the area	**Enough.** Lighting is enough for clear visibility	**Bright.** Whole area brightly lit
2	Openness	**Not Open.** Many blind corners and no clear sightline.	**Partly Open.** Able to see a little ahead and around.	**Mostly Open.** Able to see in most directions.	**Completely Open.** Can see clearly in all directions
3	Visibility	**No eyes.** No windows or entrances of shops or residences overlook this point	**Few eyes.** Less than 5 windows or entrances overlook the point	**More eyes.** Less than 10 windows or entrances overlook the point	**Highly visible** More than 10 windows or entrances overlook this point
4	People	**Deserted.** No one in sight	**Few people.** Less than 10 people in sight	**Some crowd.** More than 10 people visible	**Crowded.** Many people within touching distance
5	Security	**None.** No guards or police visible in surrounding area	**Minimal.** Some private security visible in surrounding area but not nearby	**Moderate.** Private security within hailing distance	**High.** Police / reliable security within hailing distance
6	Walk Path	**None.** No walking path available.	**Poor.** Path exists but in very bad condition.	**Fair.** Can walk but not run	**Good.** Easy to walk fast or run
7	Public Transport	**Unavailable.** No metro or bus stop, auto/ rickshaw within 10 minutes walk	**Distant.** Metro or bus stop auto/ rickshaw between 5 -10 mins walk	**Nearby.** Metro or bus stop, auto/rickshaw between 2 – 5 mins walk	**Very Close.** Metro or bus stop, auto/rickshaw available within 2 mins walk
8	Gender Usage	**Not diverse.** No one in sight, or only men	**Somewhat diverse.** Mostly men, very few women or children	**Fairly diverse.** Some women and children	**Diverse.** Balance of all genders or more women and children
9	Feeling	**Frightening.** Will never venture here without sufficient escort	**Uncomfortable.** Will avoid whenever possible.	**Acceptable.** Will take other available and better routes when possible	**Comfortable.** Can take this route even at night

Table 1 showing the rubric of rating the 9 parameters of a Safety Audit

Data Collection

Capacity building and training workshops on conducting Safety Audits were conducted in August 2018 with the stakeholders, volunteers and the partners in Choloma. The training was delivered by Safetipin consultant Martha Barriga from Colombia. The training was designed to build the capacity of local stakeholders to conduct a pilot mapping of the city to understand the key safety concerns as well as how to design interventions to make cities safer.

The training sessions included presentation on Safetipin and how the data is collected and analyzed. It also highlighted Safetipin's experience in other cities. The training workshops provided the skills and knowledge to conduct safety audits to understand the nature and causes of vulnerability in the city in order to design programs and policies that will address these effectively and sustainably. The training session focused on learning how to conduct safety audits with My Safetipin App along and making a Project Plan for data collection process. Three Indicators were prioritized by the Municipality, i.e. lighting, public transport stops, sidewalks (or walk bridges) while conducting safety audits.

After the training, volunteers were asked to register themselves on the app and do a demo or test audit. Any queries related to the app or audit was resolved in the session. The study area was divided into zones. These zones were then assigned to a group of volunteers (could be mixed groups with men and women). The groups were then given a timeline to conduct the audits in their zone. The audits are done in the evening after dark to be able to assess the lighting levels at night.

To track the progress, weekly updates on the manually conducted audits conducted were shared with the partner organization. The number of audits done by each volunteer/ group was also monitored. These audits underwent a scrutiny from our end to ensure they are correct. The audits were uploaded onto our server only after this verification process is complete.

A total of 589 audits have been conducted by 24 volunteers spanning three localities of Choloma Municipality, Choloma City, La Jutsa and Quebrada Seca. The volunteers with the number of audits conducted have been listed in Annex 2.

Pic 1 Martha Barriga introducing Safetipin

Pic 2 Participants listing the audit areas

Pic 3 Participants of the Safetipin Training Workshop

Safety Score

Safetipin codes each location point into one of four ratings – 0,1,2,3 for all the 9 parameter as seen in the Table 1. While 0 and 1 indicates low scores (with high potential to improve), 2 and 3 indicates good scores. Based on the ratings for each of the parameters, an aggregate Safety Score is generated. The Safety Score of a point is thus a reflection of the perception of safety at that particular location as well as a consolidation of the scores given to each parameter. For each audit point it is a number between 0 and 5, 0 being Poor i.e. Very Unsafe and 5 being Excellent in terms of overall safety.

The Safety Score of an area is the average of all safety audits done in that area.. The overall Safety Score for 589 audits done in Choloma Municipality is 3.3 / 5 i.e. Average. The safety ratings varies largely on account of the infrastructure provision and planning typology of the area. The Safety Score for the audit points is shown in the Map 2. Indicated in the pie chart is the percentage distribution of pins in each range. 33% of the audit points have low score in terms of infrastructure and perception of feeling parameter.

The residential colonies are rated more unsafe when compared to commercial areas. Cases of kidnapping and murder of women have been reported as major security issues of the city. In Map 3 and 4, the least and the most safe routes for Choloma Municipality are shown as per the safety audits. These routes will also be shown on My Safetipin app while using 'Safest Route' feature. If you are in an unknown locality, you can use Safest Route feature to access google maps integrated with the safety audits' data. This will give you all the possible routes to your destination along with its safety information.

Out of 589 audits conducted, 549 audits have been conducted in Choloma locality, 21 audits in La Jutsa and 19 audits in Quebrada Seca. The one or two audits done in other localities of Choloma Municipality have not been taken in account for this report. Please see attachments with this report for the least safe and most safe route maps for each of three localities.

This report provides the details of the safety assessment for the municipality of Choloma. To aid decision making, the data is presented as tables, charts, graphs and maps to highlight aspects which need immediate attention. In Choloma, it was found that major roads are not marked and neighbourhood roads are unpaved. The auditors have used church buildings, shops etc. to name the roads in the app. Therefore, the issues have been listed at the locality level supplemented with the information on surrounding built use.

Co-Relation with Perception of Safety

Different parameters have different levels of impact on the perception of safety. The Co-relation Graph indicates the extent of influence and the relative impact that each parameter has on the perception of safety.

The parameters with the maximum co-relation factor have the highest impact on the perception of safety and vice versa. From the safety audits conducted in Choloma, the parameters of Lighting, Openness, Visibility and People were found to contribute the most to the feeling of safety.

Improving these parameters would result in a location being safer and hence more people, especially women using it at night.

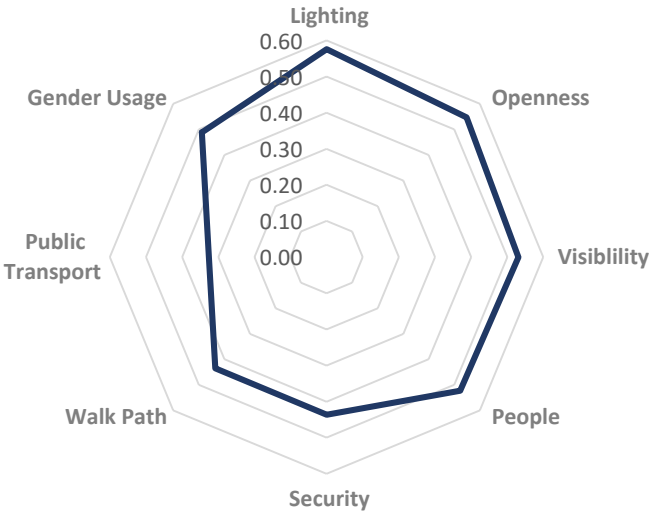
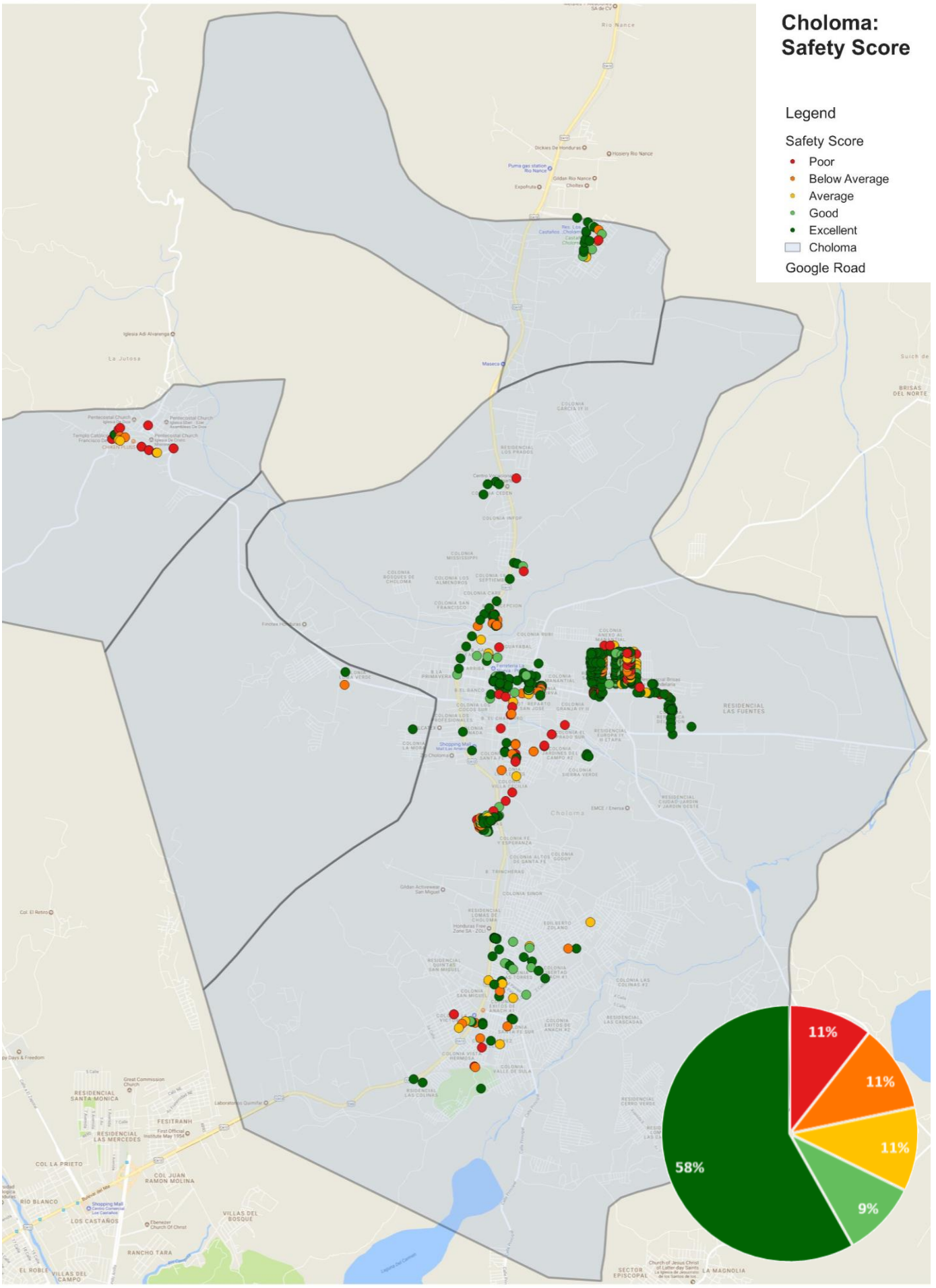


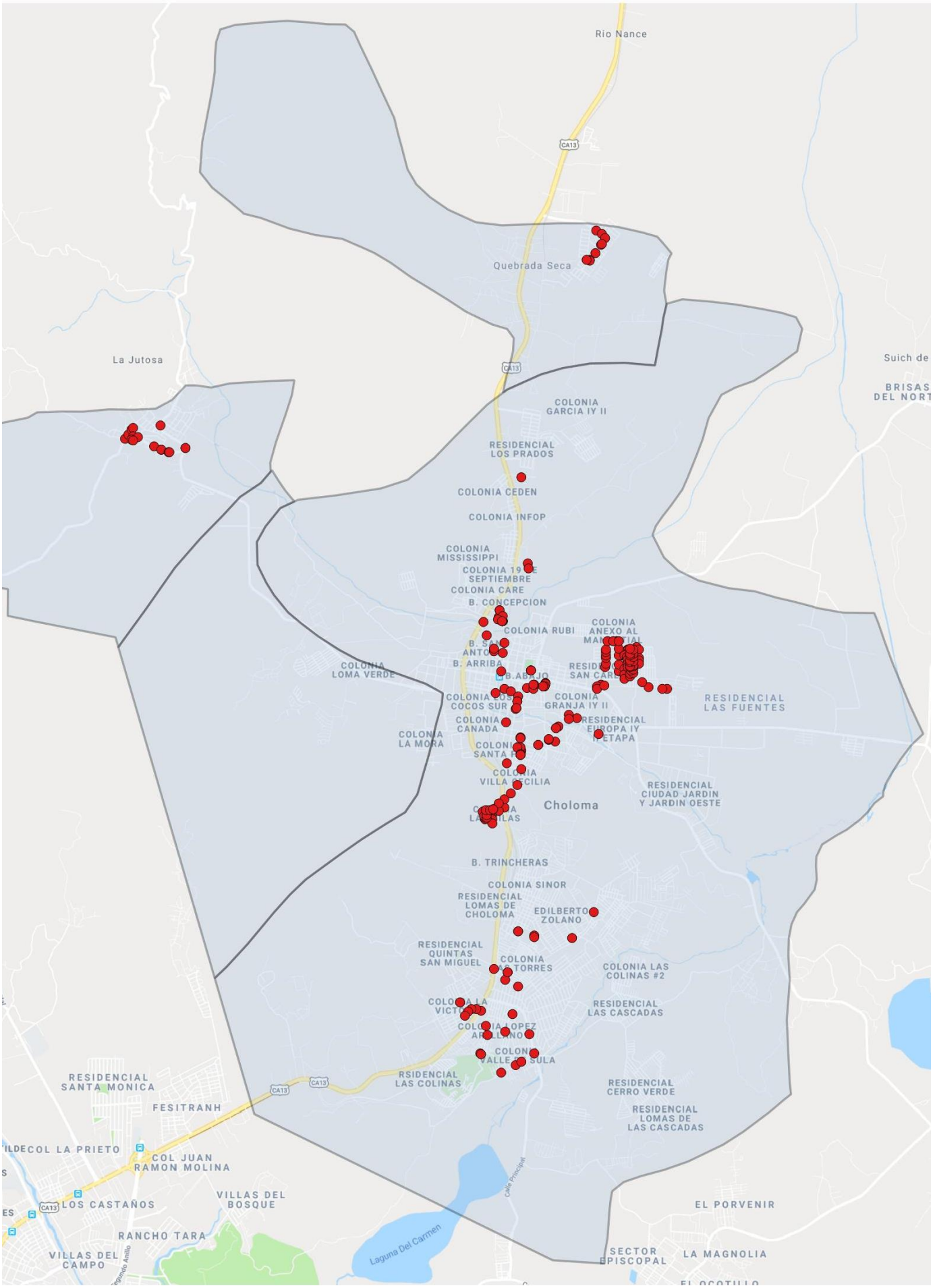
Image 2 showing Co-relation graph for Parameters with Feeling

Safety Score



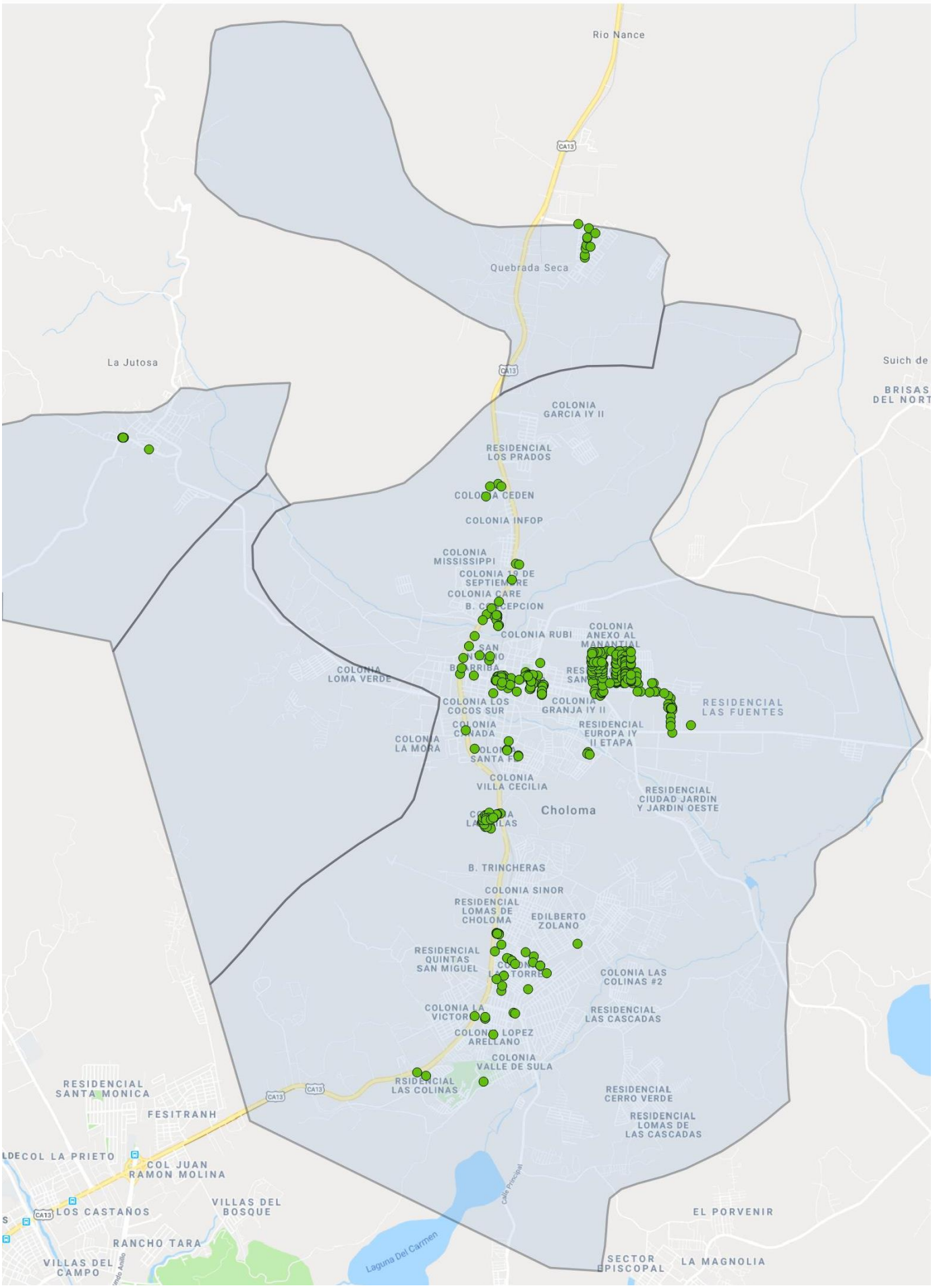
Map 2 indicating Safety Score Rating

Least Safe Routes



Map 3 indicating Least Safe Areas

Most Safe Routes



Map 4 indicating Most Safe Areas

Parameter Ratings

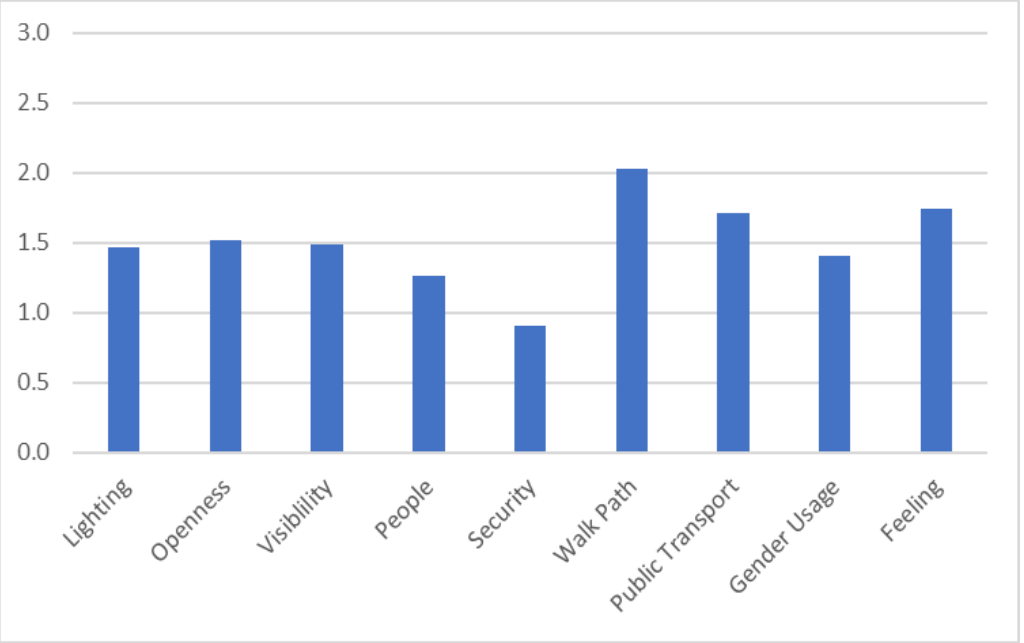


Image 3 showing **Average Audit Parameters Graph (on a scale of 3)**

Each of the nine parameters is rated 0/1/2/3, 0 being the poorest and 3 good. The average parameter ratings graph indicates the overall average rating for each parameter. As seen in the graph, the Walkpath parameter has been rated the highest and is followed by Public Transport. Seen in Pic 4, one of the audit points with highly rated footpath as it's clear of any obstruction providing a smooth and convenient movement for the pedestrians.

Pic 4 showing an audit point with highly rated walkpath

People and Gender Usage are the least rated parameters, indicating less number of pedestrians after sunset and women's participation in public spaces is poor. Seen in Pic 5, highly rated area where women and children are actively using the space. In terms of infrastructure, Security and Lighting are the poorly rated parameters. The overall feeling of Safety for Choloma is rated Average.

Pic 5 showing area with high gender diversity rating

Pin Distribution

Image 4 showing Parameter wise Pin Distribution Graph

The Parameter wise pin distribution graph indicates the number of points rated 0/1/2/3 i.e. the good points as positive and poor ratings as negative. The poorly rated points represent the locations where interventions are needed in order to improve the overall score.

The parameters of Security, People, Gender Usage and Lighting have been rated poorly for the most of the audit points, whereas parameters like Walkpath and Public Transport need to be improved in some parts of the city.

As seen in Pic 6, some streets have streetlights installed far and in between leading to dimly lit streets. The major roads as seen in Pic 4 are paved with a footpath for the pedestrians. However, neighbourhood roads as seen in Pic 5 and 7 are unpaved thus get waterlogged during rainy season, making it difficult and dangerous for the pedestrians.

Increase in Crowd and Gender Usage is dependent on improving other parameters. For Choloma, enhancing Security, Lighting and Visibility on the streets would result in safer public spaces.

The parameter wise maps and interventions for the three localities have discussed in detail in this report.

Pic 6 showing dimly lit street

Pic 7 showing walkpath in a neighobourhood

Lighting
1.5 / 3

Lighting measures the amount of brightness/ illumination at a place and ranges from Dark to Bright (rating 0 -3). A place can be lit with street lighting or from other sources such as light coming from houses, shops, street vendors etc. Light coming from the vehicles is not considered as it is temporary. The lighting rating for Choloma municipality is shown in Map 5.

Lighting has been rated 1.5/3 i.e. Average. While 44% of the audit points have been rated poor, 11% of the points have been identified as dark spots as seen in Pic 8. The dark spots indicate no source of lighting and no streetlights installed along the road. Streetlights need to be installed along this points immediately as most of them lie in residential areas with high pedestrian crowd.

At some places as seen in Pic 9, luminaire of the streetlights are dim and do not provide uniform illumination. Auditors also reported broken lamps as a cause at certain locations. These locations are considered unsafe after dark.

The locations that were rated poor for lighting parameter are listed in Table 2.

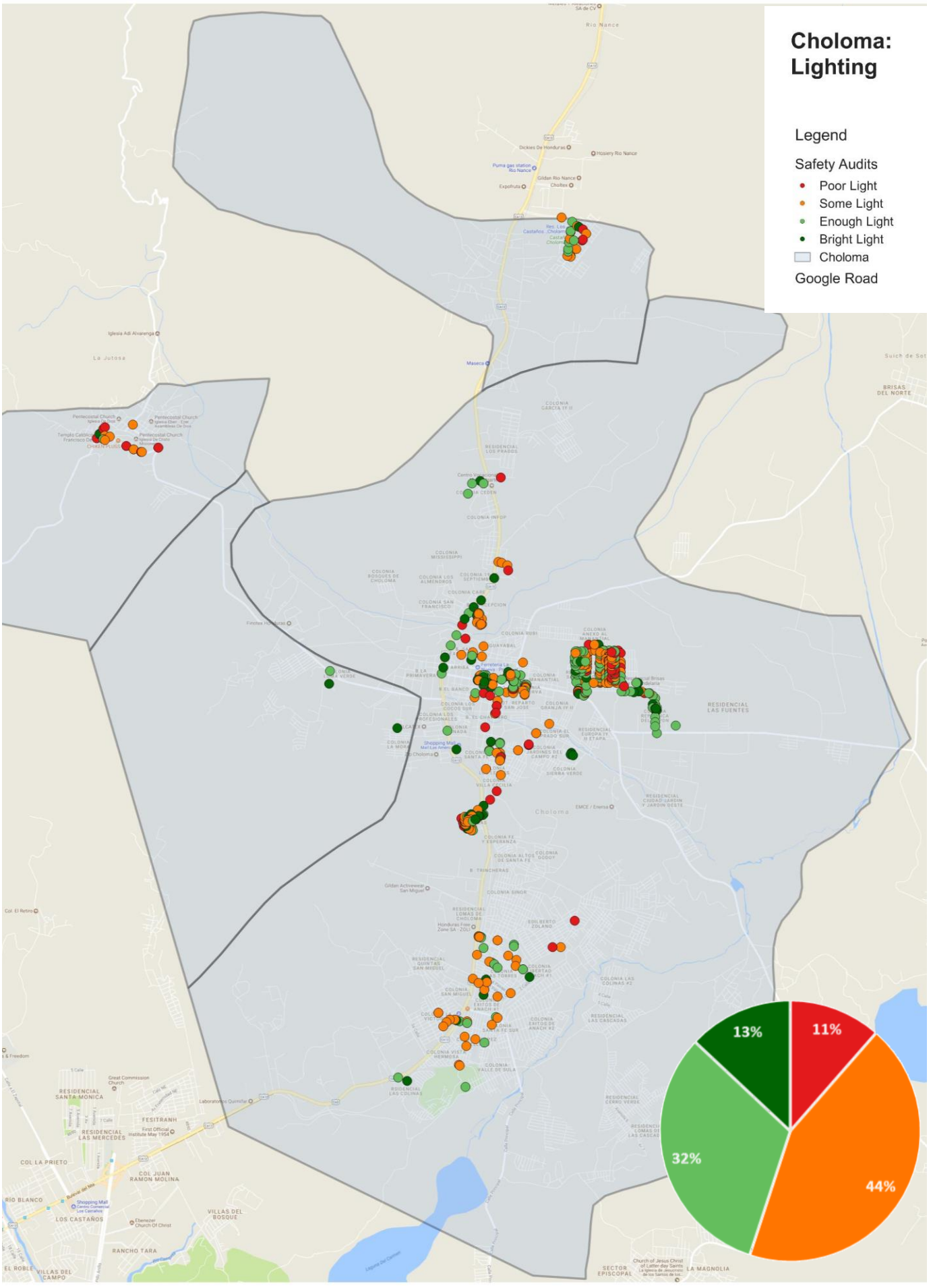
Pic 8 showing a stretch with no streetlights

Pic 9 showing dark spots due to non-uniform illumination

Locality	Findings	Street/ Area
Choloma	Lighting in residential colonies has been rated poor. Streetlights were found to be unoperational during the audits. The lamps of some streetlights were broken. People avoid the dimly lit streets after dark as they find it risky walking or driving alone.	barrio el chaparro fte.campo Juventud, calle hacia cementerio desde el centro, calle que colinda con la Esc. Jose Trinidad Cabañas, Residenticial Brisas de la Candelaria, Colonia Las Pilas, Colonia Villa Cecilia
La Jutosa	Lighting has been rated poor (score =0) on the main street in front of local school, Catholic Church, Baptist Church and cemetery	Tabernaculo Street, calle principal la alianza jutosa, a calle al campo del aguila jutosa, calle principal al guanacaste jutosa
Quebrada Seca	Dark spots on the street along Castanos De Choloma Park, Auditors reported that the lamps of the streetlights are in poor condition on the market street. Illumination is not uniform	Street along the Grocery Store, Restaurant Jasiel and Castanos De Choloma Park

Table 2 Indicating lighting issues

Lighting: Municipality Level



Map 5 Indicating Lighting Rating

Walkpath

2.0 / 3

Walkpath parameter indicates whether a person can comfortably walk at a place. This refer to the quality of sidewalk or space left for pedestrians along a road. Map 6 shows the rating of the walkpath parameter.

Walkpath has been rated 2.0/3 i.e. Above Average. 70% of the audit points have been rated 2 and above indicating presence of paved path for pedestrians. . However at certain locations, there is a need for a raised sidewalk along the main roads.(Pic 10)

On analysing points with poorly rated walkpath, it was found to be due to unpaved streets thus posing a risk for the pedestrians. Most of these poorly rated points were found in the residential colonies (Pic 11). These streets need to be properly paved along with providing provisions to manage stormwater drainage.

La Jutosa fared poorly in terms of walkpath parameter as compared to Choloma and Quebrada Seca. The commercial areas of these localities have fair availability of sidewalk, making it accessible and convenient for the pedestrians.

The walkpath's condition in each of the locality has been listed in Table 3.

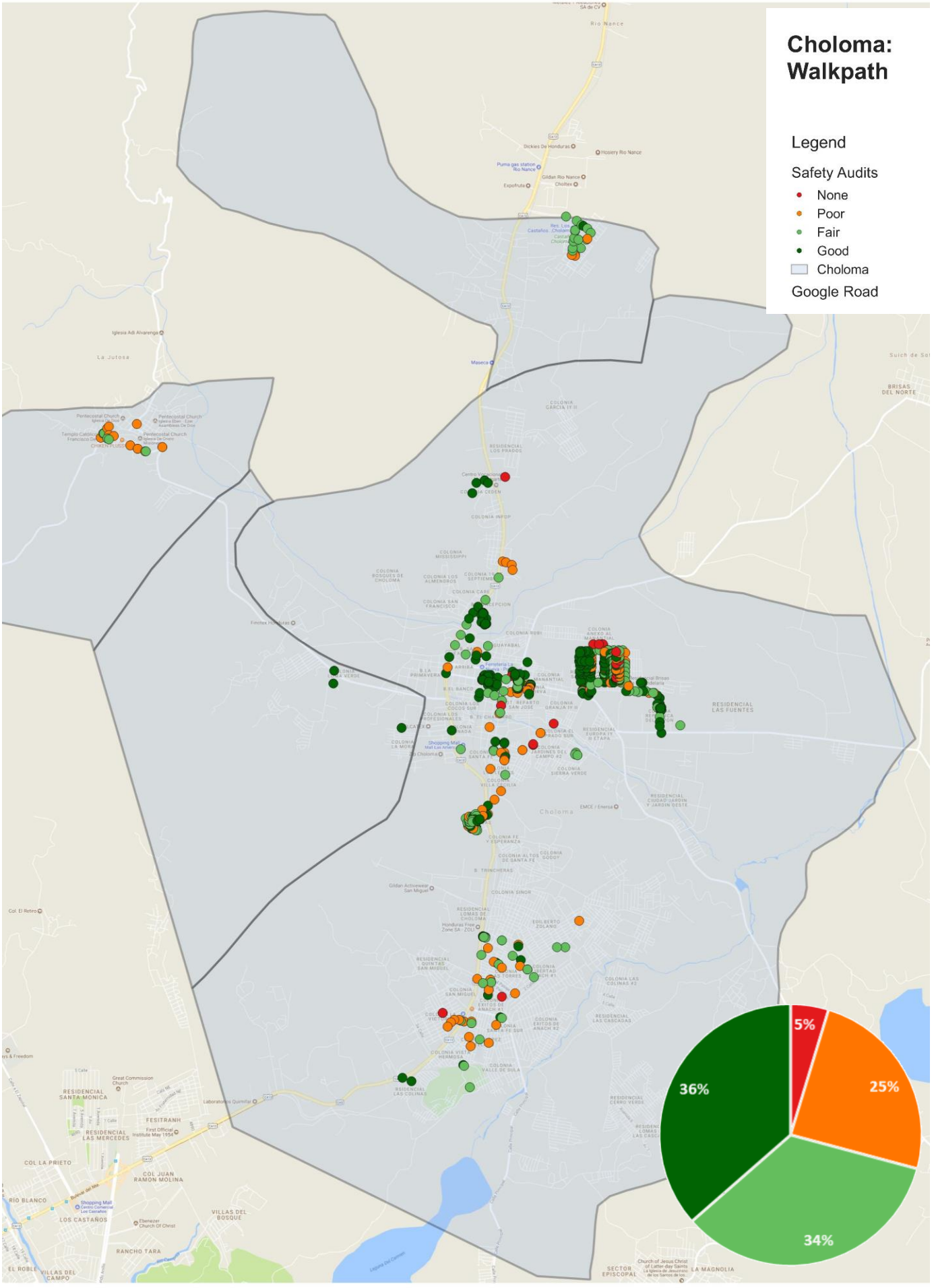
Pic 10 showing a stretch with no sidewalk

Pic 11 showing an unpaved street

Locality	Findings	Street/ Area
Choloma	Sidewalk is present along the main streets of commercial areas which has shops, offices and pubs. Some residential streets are unpaved and non-maintenace has led to growth of vegetation.	calle principal de la colonia manantial, anexos manatial mala calle, calle hacia cementerio desde el centro, calle la curva hacia colegio manantial de valores
La Jutosa	The streets are unpaved and uneven making it difficult to walk or drive.	The main street of the Catholic Church La Jutosa, el callejon barrio alianza, calle la curba jutosa
Quebrada Seca	The streets of the commercial area are properly paved	Street along the Grocery Store, Restaurant Jasiel and Castanos De Choloma Park

Table 3 Indicating walkpath condition

Walkpath : Municipality Level



Map 6 Indicating Walkpath Rating

Visibility

1.5 / 3

The parameter visibility refers to how visible is one to others , i.e. can you be seen when on the street. It is based on the principle of 'eyes on the street'. i.e. can you be seen when on the street. This comprises windows- doors of shops, houses along with street vendors and hawkers. Map 7 showing visibility rating for Choloma Municipality.

Visibility has been rated 1.5/3 i.e. Average. 53% audit points have been rated poorly making it as the one of least rated parameter in terms of physical infrastructure. This can be attributed to geographical setting of the city which has large number of unused spaces and fields in between the localities. As seen in Pic 12, open areas provides no or limited visibility. hence people tend to avoid such areas after dark. The streets that have houses with no boundary walls or low/partial boundary walls (Pic 14) fared better as compared to streets as seen in Pic 13, that has no visual contact between built environment and the street.

Pic 12 showing a street with no visibility

Pic 13 Boundary walls results in limited visibility

Security

0.9 / 3

The parameter security refers to visible security offered either by the police or private security guards (for example along ATM/Bank). Security rating can be seen in Map 8.

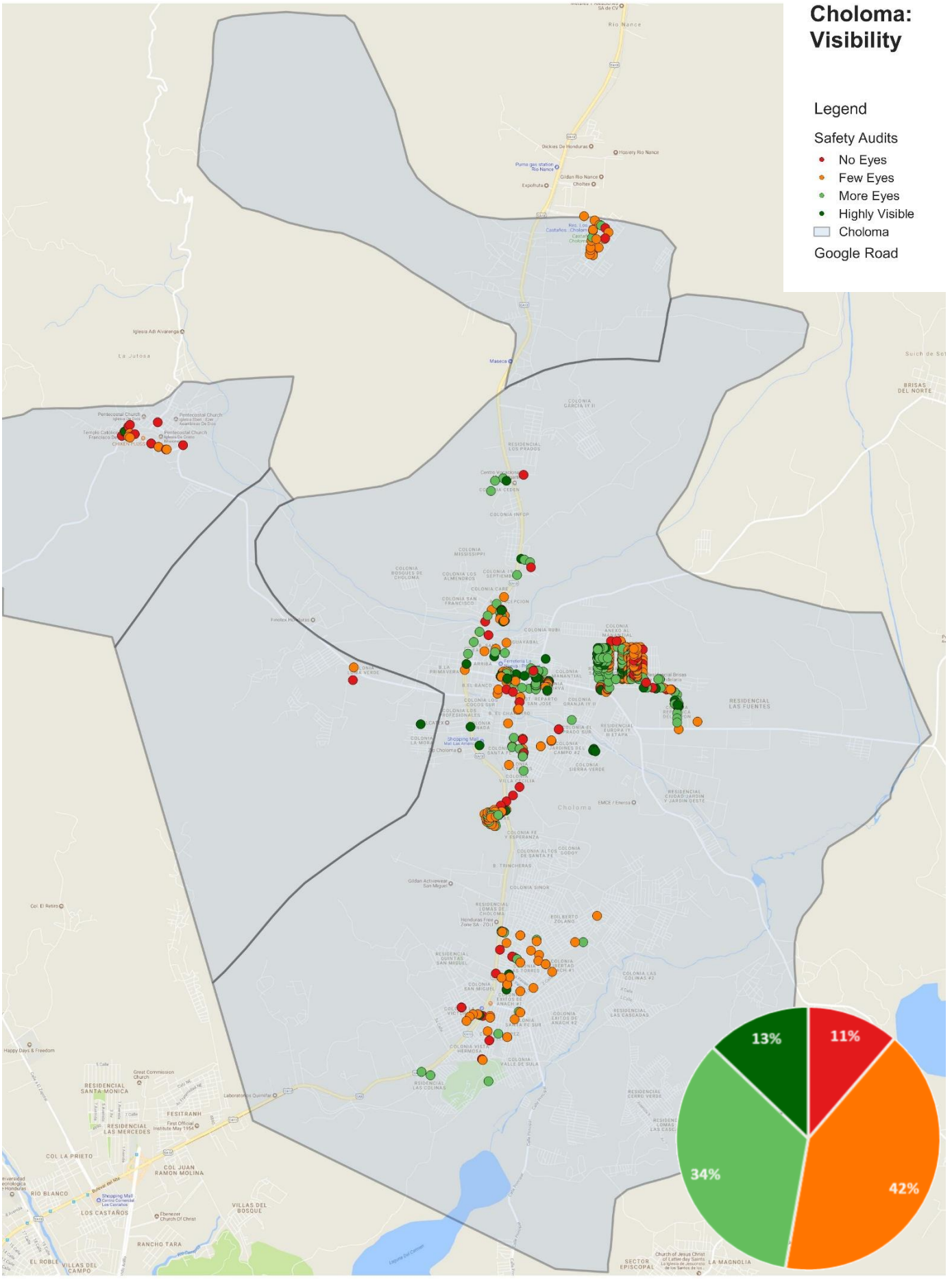
Security has been rated 0.9/3 i.e. Below Average. The auditors mentioned that security is of maximum concern as several cases of violence against women have been reported. Around the clock security should be provided at the locations that are least rated on security parameter. Pic 15 shows main roads that have been rated poor in terms of security and visibility. Regular Police Patrolling should be done along the major streets of the locality.

Additionally, auditors reported cases of harassment and mugging at the bus stops. This dissuade women to wait at the bus stop alone. Regular Police patrolling around the bus stops could prevent the cases of harassment and assault. Community Policing could help in preventing cases of assault, drug abuse and drinks.

Pic 14 Streets with partial boundary walls

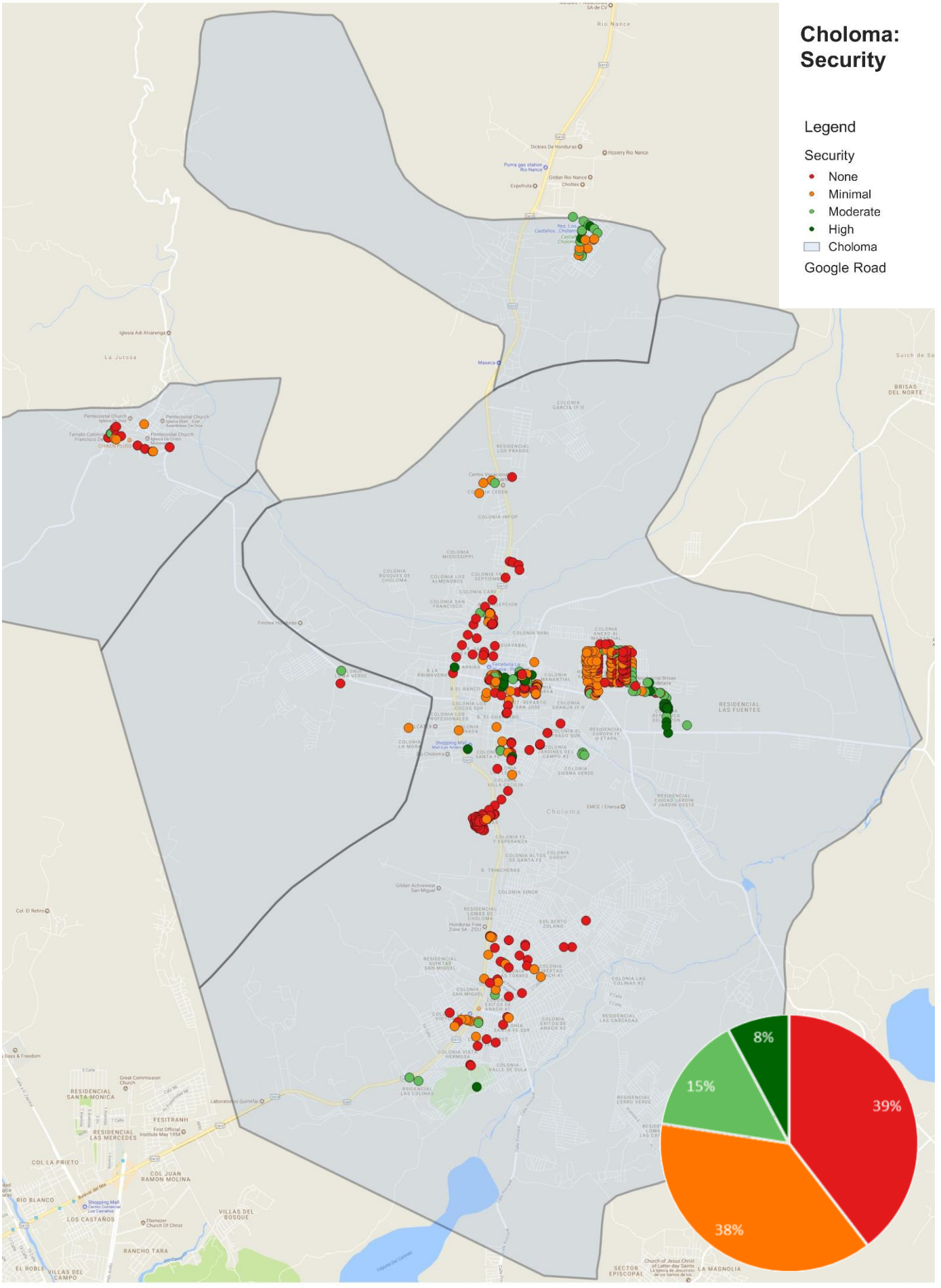
Pic 15 Main road with low visibility and security rating

Visibility : Municipality Level



Map 7 Indicating Visibility Rating

Security : Municipality Level



Map 8 indicating Security Rating

People and Gender Usage

People and gender usage are two parameters which measure the number of people on the roads, and within that, the number of women. The rating in these parameters increases as a consequence of usage opportunities and perception of safety among the citizens. While the ratings for both these parameters have been high in the day, it fares poorly in evening.

14% of the streets are rated as deserted i.e. with no pedestrians at the time of the audits. Of the 86% of the active streets, 21% of the audit points were found to have no women or children. 45% of the streets that have active participation of all the genders are mostly residential neighbourhoods. Market places were found to be gender diverse only during the day. Map 9 and 10 shows the rating of People and Gender Usage parameters.

Perception of Safety

Feeling indicates one's perception of safety at that place or audit point. This can differ from person to person, male to female. Female Auditors were less in number as compared to Male and auditors identified as Others. Image 5 shows the distribution of audits done by female, male and others.

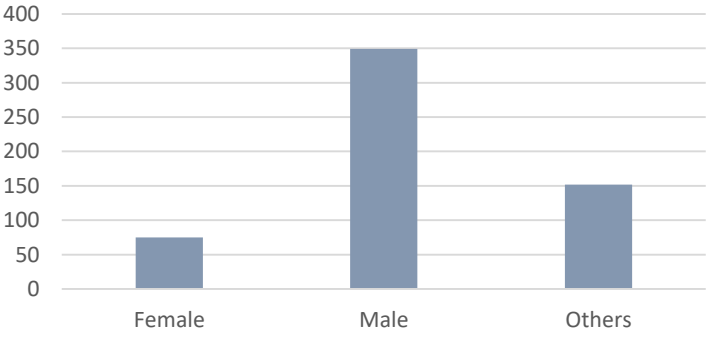
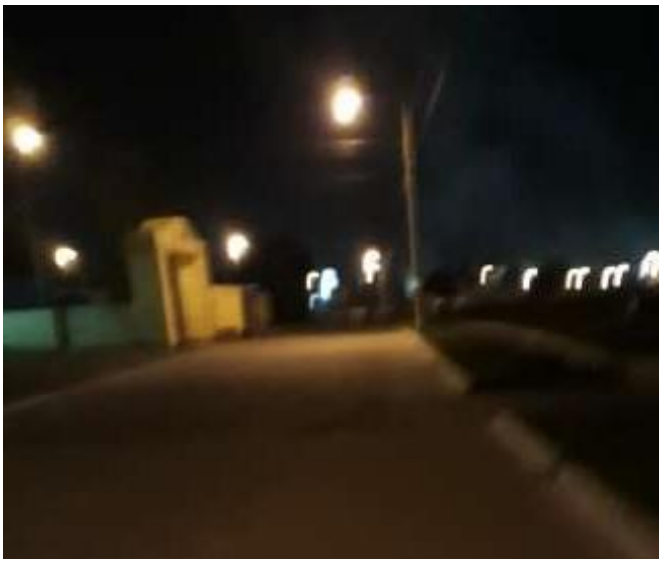


Image 5 showing Distribution of Audits by Gender

While only female auditors conducted audits in La Jutsa, only male auditors conducted audits in Quebrada Seca. Female Auditors feel highly unsafe in the streets of La Jutsa as seen in the Map 11 and Pic 16. They find the streets uncomfortable to walk and find it unsafe to walk after dark due to no streetlights.

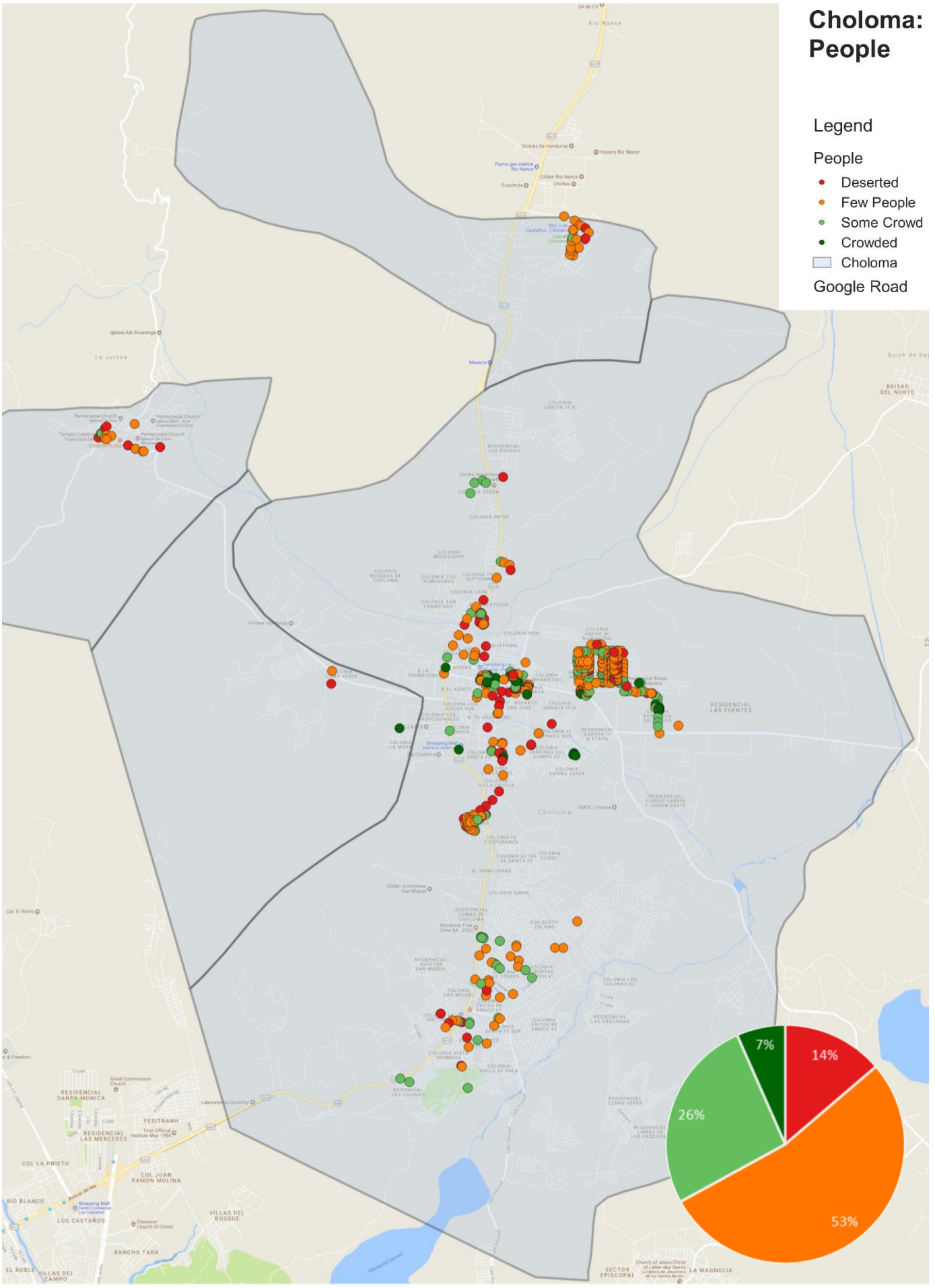
Quebrada Seca being a commercial place, male auditors have rated it comfortable to walk around even after dark (Pic 17). Map 12 shows the distribution of audits at Choloma Locality level.

Pic 16 La Jutsa's unpaved and poorly lit streets



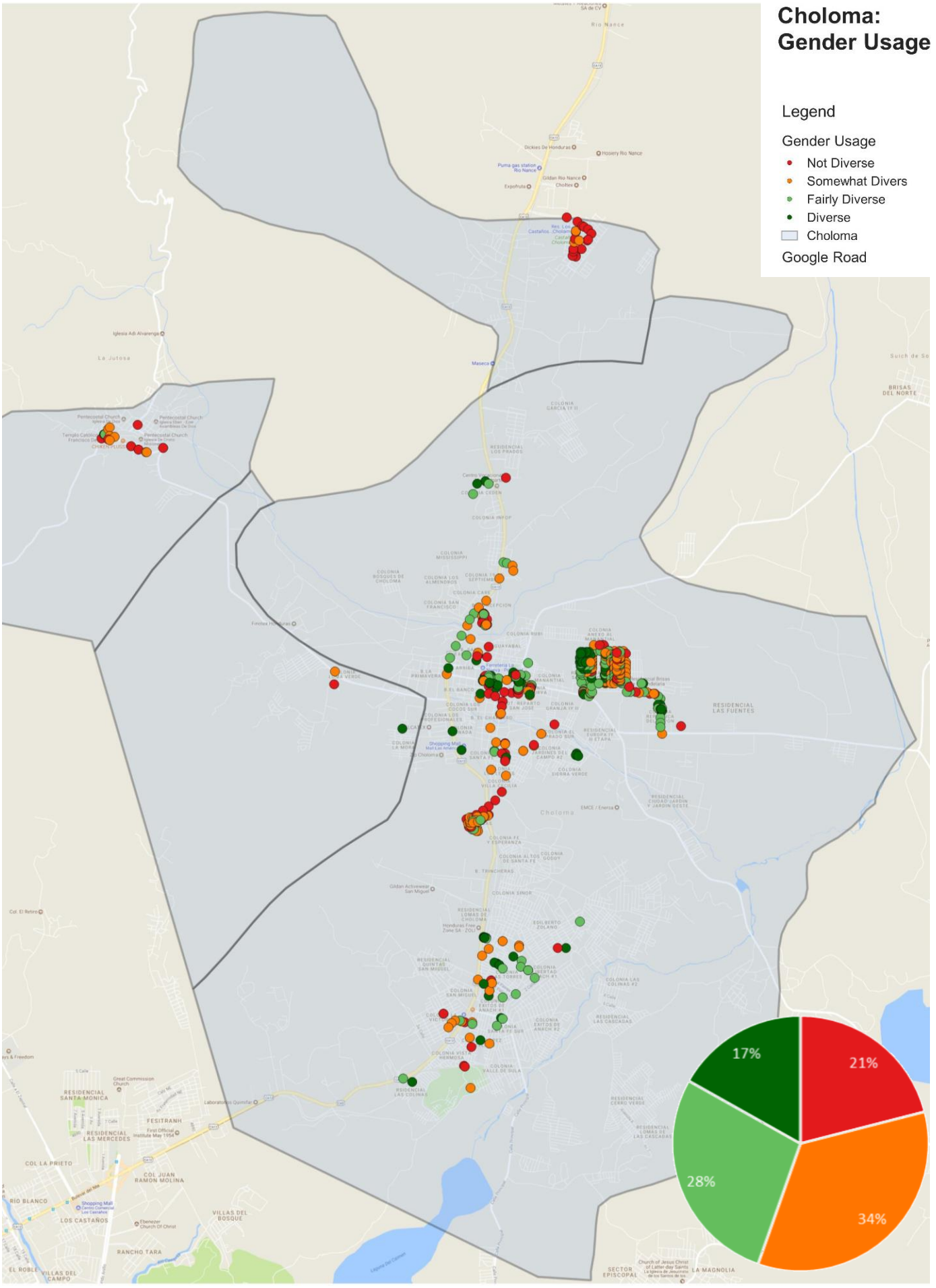
Pic 17 Main road of Quebrada Seca

People : Municipality Level



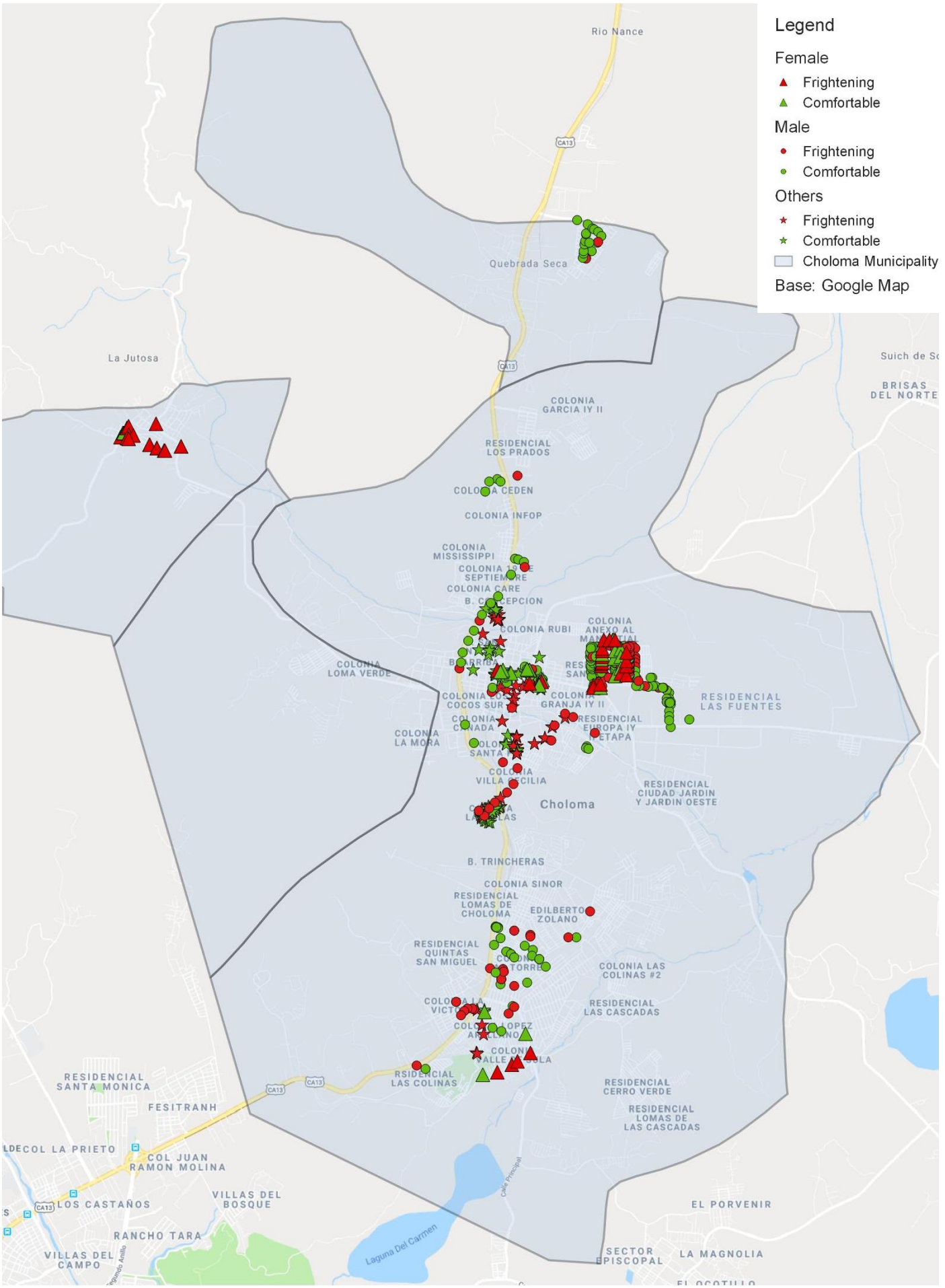
Map 9 indicating People Rating

Gender Usage : Municipality Level



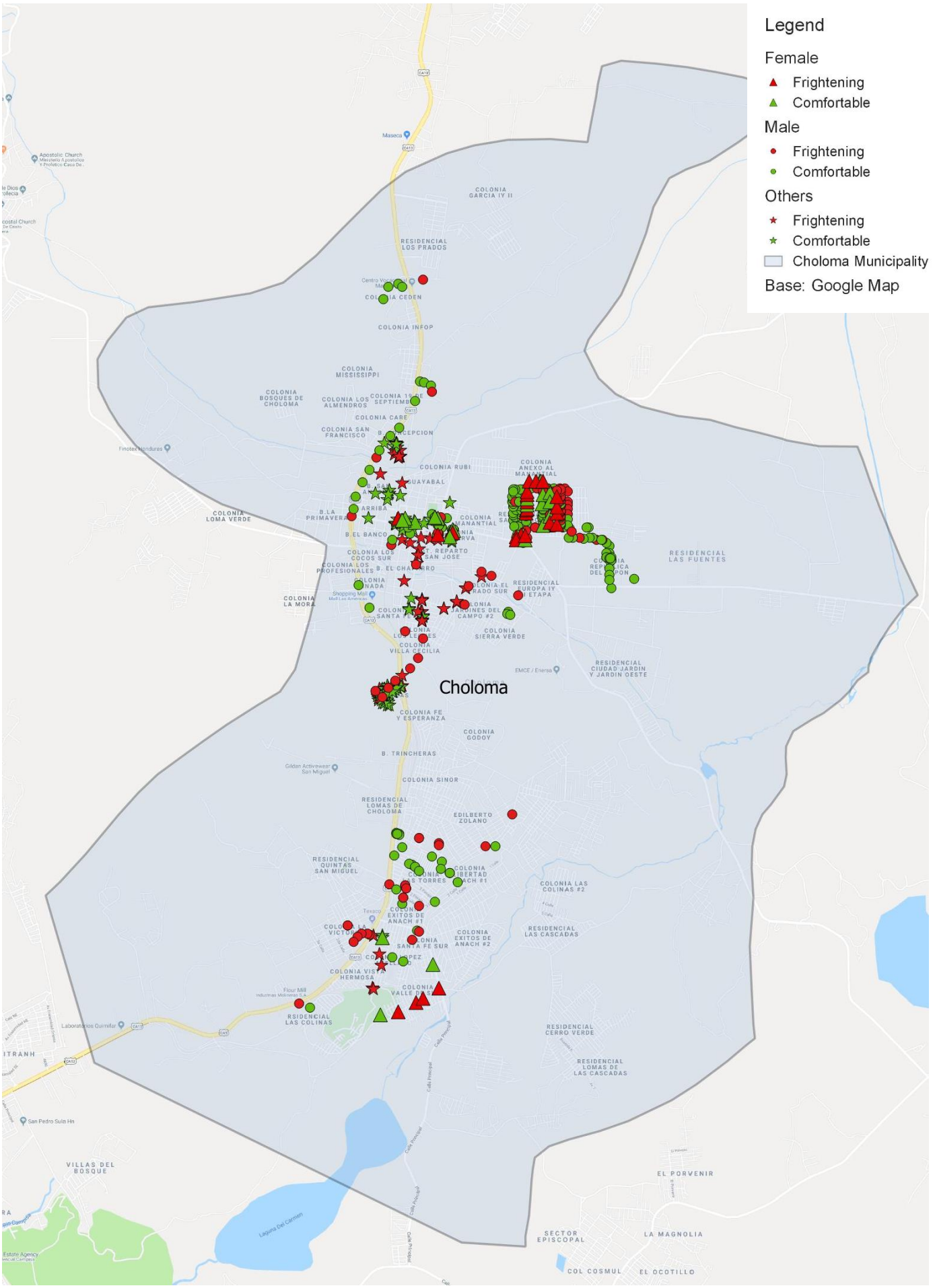
Map 10 indicating Gender Usage Rating

Feeling of Safety (Gender): Municipality Level



Map 11 indicating Feeling of Safety Rating according to various gender for Choloma Municipality

Feeling of Safety (Gender): Locality Level



Map 12 indicating Feeling of Safety Rating according to various gender for Choloma Locality

Overall Recommendations

Lighting, Walkpath, Security, Public Transportation and Visibility are infrastructural parameters that can be improved upon. Areas which are well lit, have proper sidewalks, has access to public transportation and are active, tend to be safer. In case of Choloma, increased security would result in more people especially women using public places.

- **Improve Security**

Many areas do not have any form of security – private guards or Police. Regular police patrolling needs to be ensured in all areas, especially near public parks and schools. In the marketplaces and industrial areas, around the clock security should be provided..

- **Enhance Illumination**

The existing streetlights that have been found non-operational or having faulty luminaire need to be checked. Also, regular checks are necessary to ensure uniform and unobstructed illumination. Streetlights need to be installed along areas, identified as dark spots i.e. at these locations there is no illumination at present.
Along the residential streets, additional streetlights need to be installed alternately on both sides of the road to avoid dark blind spots.

- **Construct Paved Streets**

The streets that were found unpaved and uneven needs to be paved along with providing provisions for stormwater drainage management. Along certain main roads, space has been left for the sidewalk but it hasn't been constructed. A sidewalk that has proper level difference from the road needs to be constructed, free of any obstruction.

- **Improve infrastructure at Public Transport's stops**

There is a need for improving security around bus stops as cases of murder have been reported by the auditors. Some bus stops were reported to have no or poor lighting at the time of audits. To avoid this, the bus stops should have their own source of lighting in addition to the streetlights.

Area Based Interventions

Public Spaces

Public Spaces like Church, Park and Stadiums are frequented by all citizens of the city. The focus should be on providing proper walking and lighting infrastructure along the streets adjoining them. Existing streets along the major public spaces were found to be unpaved and uneven as seen in Pic 10 and 11. These streets should be paved to provide unobstructed movement for the pedestrians.

Residential and Industrial Streets

The most unsafe locations were reported in residential areas with poor lighting (Pic 12) and some industrial areas (Pic 13) where cases of assault and murder have been reported. Regular police patrolling needs to be carried out here. Streetlights should be installed alternately along the sides of the road to ensure uniform illumination.

Pic 10 Street of Catholic Church, La Jutosa

Pic 12 Cuadra de la villa valen**cia**

Pic 11 Street along Lopez Arellano Park

Pic 13 Street along a mill, rated dangerous by auditors

Annex 1: Using My Safetipin App

My Safetipin is a mobile phone application that works to make our cities safer by collecting safety-related information on a large scale through crowdsourcing. At the core of the app is the safety audit that has been designed based on the Safety audits from around the world. These audits should be conducted after sunset. This is suggested to effectively measure the illumination by Street lights and other sources. Also, it is during late evenings and night that a place is considered unsafe.

1. To conduct an audit, the first step is to download the app. My Safetipin, available
for free on Apple and Google Play stores.

2. For using the app, it is necessary to ensure that the GPS location is on and the phone is charged. On the home screen of the app, towards the upper left-hand side is the settings option. Here we select the option “Do a safety audit”.

3. This brings us to the audit screen where all the nine parameters are listed:

4. The audit screen shows the nine parameters. On selecting a particular parameter, the rating scale is visible. Once all the parameters have been rated, it is important to Pin and take photographs. One can take up to 10 photographs of the location being audited. If the auditor feels the need to give additional information, then that can be specified as a comment. After this, the audit is complete and can be submitted. In case of a poor internet connection, up to 10 audits shall be saved in the app’s memory. They shall get uploaded onto our server, once internet is available.

5. Once the audit is done, one can also view the audits conducted by them. On the home screen of the app, towards the lower right corner, on selecting the option “more”, one can see the option for Pins. In this, select the option “my pins” which shows the audit pins submitted by them.

Annex 2: List of Volunteers

S.No.	User ID	Name	Gender	Email-id	Total Audits
1	45498	luisorellana	M	frodoluis87@gmail.com	97
2	45496	edithenamorado	F	edithenamorado96@gmail.com	36
3	45487	davidperdomo	M	davidwpm3@gmail.com	74
4	45494	EdgarChavez	M	chavezEdgar084@gmail.com	27
5	45499	keisypineda	O	pinedakeisy50@gmail.com	22
6	45492	jeisonmejia	M	jeckson_mejia18@hotmail.com	18
7	45502	JCesar	O	jce26345@Gmail.com	33
8	45611	sandralopez	M	sl2924263@gmail.com	1
9	45511	secretariadeseguridad	M	fitz66609@gmail.com	18
10	45495	olmanyassir	O	olmandeisis08@gmail.com	13
11	45497	santosmendez	M	santosmendez72@hotmail.com	26
12	45503	saiadmartinez	M	saiadmartinez32@gmail.com	21
13	45457	carlosmendez	O	cm116636@gmail.com	26
14	45501	franklinrodesno	M	franklin_rodesno_18@hotmail.com	15
15	45493	HectorBonilla	M	hectorgbonillasanchez@gmail.com	40
16	45491	eder	M	eder86359@gmail.com	20
17	45505	olgapadilla	O	olgapashing@gmail.com	34
18	45507	ciudadmujercholoma	F	pinedayadira136@yahoo.com	31
19	45510	mayrarodriguez	O	mr910914@gmail.com	10
20	45512	JeydiGarciaC.M	F	jeydi77@gmail.com	3
21	45509	Giselle	O	giselle18@gmail.com	13
22	45479	prasadsandbhor	M	sandbhorprasad@gmail.com	1
23	45549	cruzkomander	M	ivancruz670@gmail.com	1
24	45458	olman	O	olman_ysg@hotmail.com	2

NOTES

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