

ENVIRONMENTAL IMPACT EVALUATION FOR THE RUMICHACA - PASTO DOUBLE-LANE PROJECT, PEDREGAL - CATAMBUCO SECTION, UF. 4 AND UF 5.1., CONCESSION AGREEMENT UNDER THE PPA NO. 15 OF 2015



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Géminis Consultores Ambientales SAS



Chapter 5.3 SOCIAL-ECONOMIC CHARACTERIZATION

Pasto, March 2017

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### 5.3. SOCIAL-ECONOMIC ENVIRONMENT

This chapter pertains to the social-economic characterization of the area of influence in the Rumichaca - Pasto Double-Lane Project, Pedregal - Catambuco Section, Concession Agreement Under Scheme APP N° 15 of 2015, which extends itself on the major land units of the municipalities of Imués, Yacuanquer, Tangua and Pasto and, from these, 28 minor land units which correspond to 25 villages and 3 neighborhoods distributed throughout functional units UF4 and UF5 sub-sector 1, as shown on Table 5.3.1, and illustrated in Figure 5.3.1 and Figure 5.3.2.

Table 5.3.1 Area of Social-Economic Influence

Functional Unit	Major Land Units	Minor Land Units	Construction Activity
UF 4	Imués	V. / Pilcuán	Road infrastructure construction, ZODME
		V. / El Pedregal	Road infrastructure construction, ZODME
	Yacuanquer	V. / Inantas Bajo	Road infrastructure construction, ZODME, access
		V. / Inantas Alto	Road infrastructure construction
	Tangua	V. /Cocha Verde	Road infrastructure construction, ZODME, access
		V. /El Tablón Obraje	Road infrastructure construction
		V. /San Pedro Obraje	Road infrastructure construction, ZODME, access
		Corazón de Jesús Neighborhood, Tangua	Road infrastructure construction, ZODME
		Fatima neighborhood, Tangua	Road infrastructure construction, ZODME
		Bolivar neighborhood, Tangua	Road infrastructure construction, ZODME
		V. / El Vergel	Road infrastructure construction, ZODME, campsite, access
		V. /Buena Esperanza	ZODME and access
		V. / El Cebadal	Road infrastructure construction,

UF 5.1			ZODME, access
		V. /Chávez	Road infrastructure construction, ZODME, access
		V. /El Tambor	Road infrastructure construction, ZODME, campsite, access
		V. /El Páramo	Road infrastructure construction, ZODME, access
		V. / La Palizada	Road infrastructure construction, ZODME, access
		V. / Marqueza Bajo	ZODMES
		V. /Los Ajos	Road infrastructure construction
		V. /Marqueza Alto	Access
	Pasto	V. /Gualmatan Alto	Road infrastructure construction
		V. / Vocacional	Road infrastructure construction, ZODME, access
		V. /Cubijan Alto	Access
		V. /Cubijan Bajo	Access
		V. /La Merced	Road infrastructure construction, ZODME, access
		V. / San Jose de Catambuco	Road infrastructure construction
		V. /Catambuco	Road infrastructure construction, ZODMES
V. /Huertecillas	Road infrastructure construction		

Source (Géminis Consultores Ambientales, S.A.S. 2016)

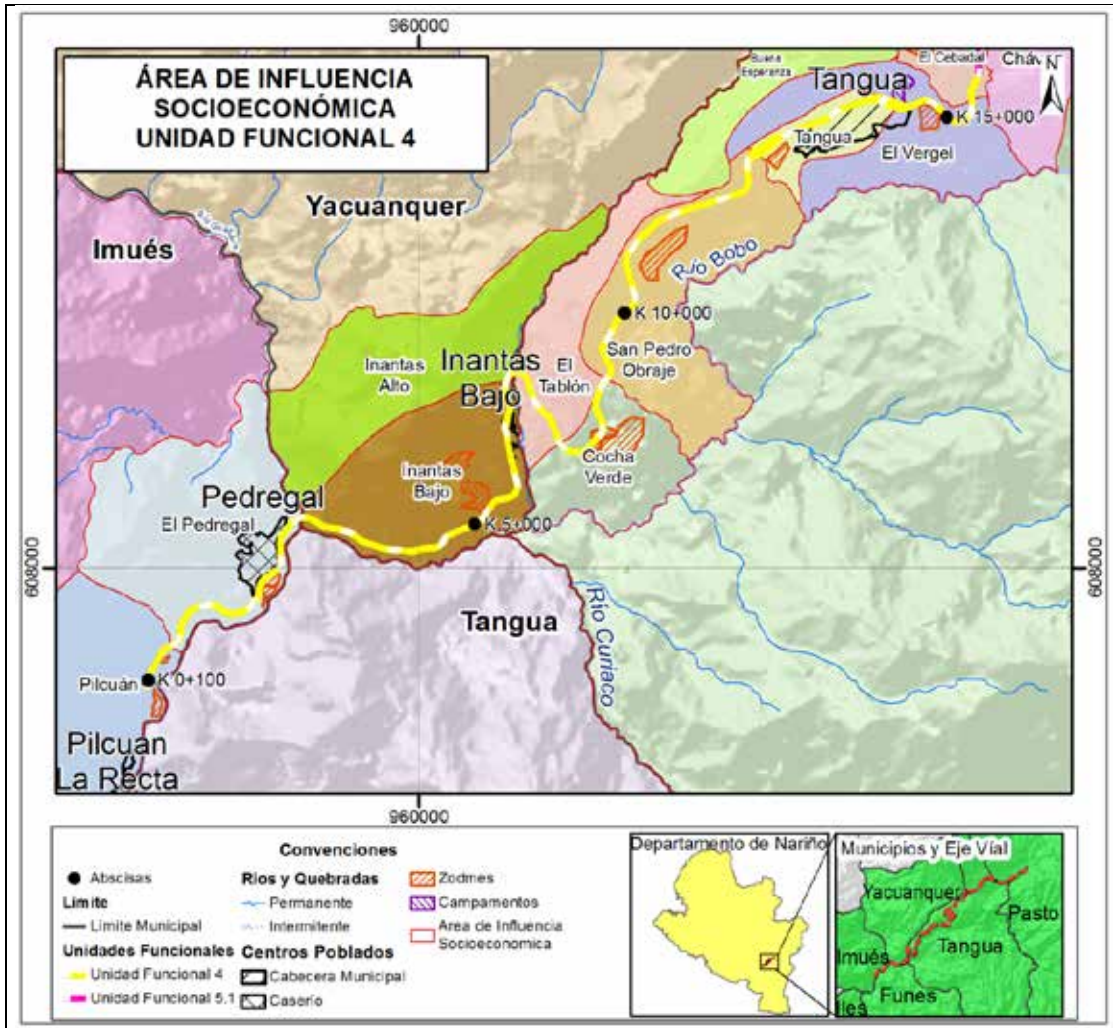


Figure 5.3.1 Area of Influence UF 4

Source (Geminis Consultores Ambientales, S.A.S. 2016)

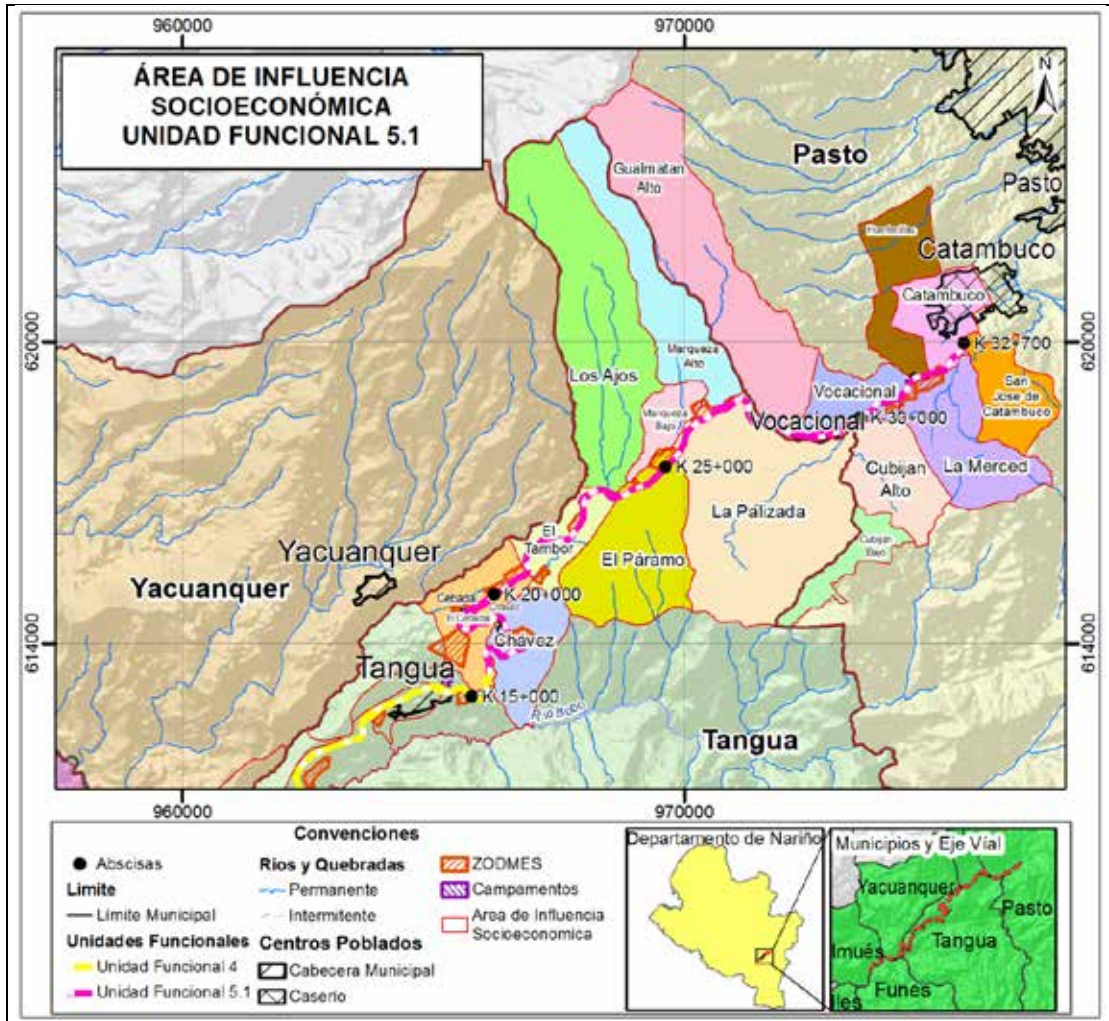


Figure 5.3.2 Area of Influence UF 5.1

Source (Geminis Consultores Ambientales, S.A.S. 2016)



Characterization and analysis of each of the components that comprise the social-economic environment were conducted on the major land units on the basis of consultation and analysis of official secondary information, collected in the land entities of the area of influence at the national and departmental level. The characterization of minor land units was conducted by use of primary information collected on the field, with the aid of tools such as village or neighborhood data-sheets that apply generally to people belonging to the community organizations, or those that have lived in the territory for several years.

Moreover, social-property data-sheets were applied for the purpose of the classification of the population living in those infrastructures that are planned for any type of intervention.

It is noteworthy to mention that according to the Ministry of the Interior, resolutions No. 22 of 01 August 2016 and Resolution No. 23 of 01 August 2016 (see annex 5.3.5d) the presence of indigenous communities Cabildo de Montaña de Fuego and Cabildo de Catambuco is acknowledged in aforesaid functional units, subject to the Prior Consultation process. Therefore, the results from this process will be submitted in a separate document, once said process is terminated.

### 5.3.1. Participation and socialization with the communities

This item is registered as stipulated in the current legislation, and develops the participation and socialization process conducted with the social and institutional players in the area of influence in the Pedregal - Catambuco section, which collect the expectations and concerns raised by the road project Rumichaca - Pasto.

The Colombian Political Constitution in its Articles 87 and 88 guarantees that every member of society has the possibility to participate in the decisions that may affect them, defining the National Territory as a space for democratic and participative coexistence, where there are mechanisms to promote and guarantee citizen participation, legitimizing civilian rights and duties, within the framework of collective good and the defense of common interests; to that effect, Act 134, 1994; Act 1757, 2015; Act 472, 1998 and Act 393, 1997, among others, seek to explore the new fundamental guidelines to recognize all of the country's Inhabitants, with no distinction.

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Consequently, the guidelines and participation for the Pedregal - Catambuco section of the road infrastructure project Rumichaca - Pasto, are framed within Decree 2041 of 15 October 2014, which in Article 15 refers to the fact that the communities shall be informed of the scope of the project, with emphasis on the impact and management measures. Furthermore, the terms of reference are established by way of Resolution 0751 of March 2015 of the Ministry of the Environment and Sustainable Development for purposes of road project environmental licenses.

In that regard, the design and development of the socialization process was established for two instances, the first one named Initial Socialization of the EIA, and the second one named Socialization of EIA Results; in general terms, the process began with a summons targeted at promoting the participation of the regional and local authorities, community organizations and the community at large for the area of influence, thanks to which several active participation venues by socially influential players were accomplished, such as the Nariño Governor's Office, CORPONARIÑO, mayors, municipal ombudsmen, Joint Action Committees and the general community in the area of influence of Pedregal - Catambuco section. In that regard, this section explains the procedure used for the development of the Initial Socialization and the results pursuant to the terms of reference.

The procedure for development of each of the meetings was arranged during the moments described below:

- Summons Moment
- Socialization Moment
- Community Participation Workshop Moment

Summons Moment

In regard to the summons to the socialization venues, as well as the Initial Meetings, such as the delivery of EIA results, the same methodology was implemented. Below is a description and reference of the elements and tools used.

Regional authorities: Nariño Governor's office and CORPONARIÑO, local authorities: City Halls and Ombudsmen offices from the major land units of Imués, Yacuanquer, Tangua and Pasto, and communities of the area of influence through the chairperson or

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members of the Joint Action Committees (JAC), with whom the first contact was established.

This first contact took place by telephone (See annex 5.3.1 base1), which apart from the contextualization of the project, it brings forth the importance of the encounter and encourages participation by seeking to establish the place, time and date of the meeting. After said arrangement was made, each meeting was formalized through a document issued and filed by the CVUS, prior to the meeting (see annex 5.3.1 ofi1, Image 5.3.1, Image 5.3.2 and annex 5.3.1 ofi2). The agenda with the communities was established considering the times and dates with the largest availability by the community, in order to guarantee the attendance of the communities.



Image 5.3.1 Model of the summons with file number  
Source (Geminis Consultores Ambientales, S.A.S. 2016)

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Image 5.3.2 Model of the summons to the results meeting  
Source (Geminis Consultores Ambientales, S.A.S. 2016)

The community leaders from the minor land units provided guidance in regard to the community's own summons mechanisms in order to extend the invitation and encourage active participation during the encounter; as a matter of fact, the leaders scheduled meetings prior to the encounter, visited inhabited households to extend the invitation, went on loudspeakers a few days prior and committed their communities for participation purposes. Moreover, to strengthen the process, the consultancy team put up posters in the busiest places such as education institutions, chapels, social halls and stores. In addition, fliers were delivered to the Inhabitants from the minor land units, as shown on Image 5.3.3, Image 5.3.4, Image 5.3.5, Image 5.3.6 and Image 5.3.7 (See annex 5.3.1 Pic 1.)



Image 5.3.3 Poster and flier of Initial EIA Socializations, delivered to the communities in the area of influence

Source (Geminis Consultores Ambientales, S.A.S. 2016)



Image 5.3.4 Delivery of fliers of the Initial Meeting, La Esperanza Village - Municipality of Tangua

Flat Coordinates Origin Magna Colombia West N: 617665,7613 E: 968896,0663

Date 20/04/2016

Source (Geminis Consultores Ambientales, S.A.S. 2016)

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Image 5.3.5 Dissemination with initial meeting posters, Botanilla Village - Municipality of Pasto

Flat Coordinates Origin Magna Colombia West N: 621560,06 E: 974534,7756

Date 28/03/2016

Source (Geminis Consultores Ambientales, S.A.S. 2016)



Image 5.3.6 Delivery of results meeting fliers, Huertecillas Village

Date 01/10/2016

Flat Coordinates Origin Magna Colombia West N: 621560,0692E: 974534,7756

Source (Geminis Consultores Ambientales, S.A.S. 2016)

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Image 5.3.7 Dissemination of results meeting posters, Cebadal Village  
 Date 01/10/2016  
 Source (Geminis Consultores Ambientales, S.A.S. 2016)

In addition to aforementioned mechanisms, one or two hours before the encounter, there were loudspeakers informing the objective, place, date and time of the reunion, this exercise was conducted by the CVUS mobile unit. (See annex 5.3.1 loudspeaker).

From this moment on, it is possible to conclude that the summons process for the socialization spaces allowed to extend the invitation to the regional, local and village authorities, as well as the communities in the area of influence with their most representative community organizations: Joint Action Committees, Parents Associations from the education sector, Community Mother's Associations, among others.

### 5.3.1.1 Initial Socialization

#### Socialization Moment of the EIA Initiation

The initial socializations of the EIA with Government, Municipal Authorities and the communities in the area of influence of the double-lane project for the Rumichaca - Pasto road began on 4 April 2016, with the participation of:

Government Organizations such as CORPONARIÑO, Nariño Governor's Office

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City Halls and Ombudsman's Offices for the major land units in the area of influence (Imués, Yacuanquer, Tangua and Pasto)

Representatives of the community organizations and the community at large at the minor land units in the area of influence, detailed in Table 5.3.1 presented above.

The goal of the initial EIT socialization with the social players in the area of influence was to present the general aspects of the Rumichaca - Pasto road project, such as technical characteristics, scope, activities and environmental implications of the project in general, its components, stages, areas of influence and scopes of the EIA; to that end, a meeting agenda was suggested, starting from the welcome, presentation of the objective, presentation of the goal, presentation of the 'Unión del Sur' Road Concession and the National Infrastructure Agency (ANI, from its Spanish Acronym), introduction of the staff to develop the EIA, general aspects of the road project and the EIA formulation process, as seen in Image 5.3.8.



Image 5.3.8 Initial Socialization Agenda  
Source (Geminis Consultores Ambientales, S.A.S. 2016)

In addition to agreeing on an agenda, each encounter offers a space to solve the participants' questions, as well as to recognize any expectations in regard to the road project; said concerns are revisited within this description and the written socialization minutes are detailed in situ, signed by the representatives from the authorities, as well as the JAC chair persons as legitimate representatives of the community (See annex 5.3.1, Activity 1); it is worth mentioning that this space was not closed until all of the



questions from the attendees at the meeting were answered, therefore the meetings varied between 2 to 3 hours, a time-frame when all of the clarifications issued by the attendees were provided.

As educational support, a presentation was prepared previously for each community on Power Point in order to facilitate the acquiring of the information by the attendees (See annex 5.3.1ppt1 and Image 5.3.9), and additionally, informative materials were distributed among the attendees regarding the road project and its advancements, which included the web page, mobile offices and contact phone numbers to provide direct attention to the community, as observed in Image 5.3.10. (See 5.3.1mat info).



Image 5.3.9 Slide Presentation of the Initiation  
Source (Geminis Consultores Ambientales, S.A.S. 2016)






Image 5.3.10 Informative bulletin delivered to the participants on socialization  
Source (Geminis Consultores Ambientales, S.A.S. 2016)

Table 5.3.2 and Table 5.3.3 contain the main concerns and answers resulting from the meetings with the regional and local authorities, as well as the dates and attendees at each of the meetings.

During the initial socialization process, the goals to present the most relevant features of the project and to explain to the attendees how each of the aspects relative to the preparation of the EIA would be addressed were met for the road project, creating spaces of information and participation.


Table 5.3.2 Regional authorities attending the initial EIA socialization meetings



SUMMONED	ATTENDEES	REGISTRATION
NARIÑO GOVERNOR'S OFFICE	TOTAL ATTENDEES: 10 Among others: Governor: Camilo Romero	


DATE: 04/04/16	Government Agencies 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
<p>Participants' concerns</p> <p>It is important to remember the indigenous reservations and councils.</p> <p>When will the construction of the road begin</p> <p>How many tolls will there be on the road</p>	<p>CVUS answers</p> <p>Assistance in the prior consultation process will be requested from the Ministry of the Interior and provided.</p> <p>Time is relative, considering that apart from other variables, it is necessary to develop (according to standard) the prior consultation process, to make the Environmental license request process legal.</p> <p>Two tolls.</p>	
<p>Project Perception</p> <p>The Governor's Office of Nariño, as the regional authority, is willing to assist and support the actions undertaken by the project.</p>		
<p>CORPONARIÑO</p> <p>DATE: 07/04/16</p>	<p>TOTAL ATTEENDEES: 9 Among others: Agencies of CORPONARIÑO 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	
<p>Participants' concerns</p> <p>There is an Environmental Diagnosis of the Alternatives CORPONARIÑO, stated its</p>	<p>CVUS answers</p> <p>The initial formulator escalated the consultation to the National Environmental License Authority (ANLA, from its Spanish acronym), and there an</p>	
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availability to arrange a work group around the topic.	environmental diagnosis of alternatives available, which is the reference for the preparation of the Environmental Impact Assessment (EIA).
<p>Project Perception</p> <p>CORPONARIÑO, as a local environmental authority, has shown its availability to cooperate and support all actions undertaken by the project and suggests articulated work possibilities.</p>	

Table 5.3.3 Local authorities attending the initial EIA socialization meetings

SUMMONED	ATTENDEES	IMAGE FILES
<p>IMUÉS MUNICIPALITY MAYOR'S OFFICE</p> <p>DATE: 12/04/16</p>	<p>TOTAL ATENDEES: 10</p> <p>Among others:</p> <p>Planning Secretariat UMATA 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	
<p>Participants' concerns</p> <p>A final design is available. In regard to the personnel hiring process.</p>	<p>CVUS answers</p> <p>The current design is preliminary; as soon as the definitive design is completed it will be disseminated to the community, in order to avoid any false expectations.</p> <p>The SENA Public Employment Agency and 'Unión del Sur' Road Concession shall receive resumes, which are to be considered according to the needs of the project and giving priority to qualified and non-qualified personnel from the Department of Nariño.</p>	

<p><b>Project Perception</b>                  The local authority has demonstrated its will to cooperate and support the actions undertaken by the project, suggesting ongoing communication on the advancements of the project.</p>		
SUMMONED	ATTENDEES	IMAGE FILES
IMUÉS MUNICIPALITY OMBUDSMAN DATE: 11/05/16	TOTAL ATTEENDEES: 5 Among others: Municipal Ombudsman Secretariat 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
Participants' concerns  Purchase of properties		CVUS answers  Currently the project is in the study and design phase, where there is already a prior design of the road, but until there is a final design that determines the direct impact on properties, under legal terms it is still possible to create agreements with the directly affected communities. This highlights the fact that the concessionary company will provide direct assistance to these people and processes.
<p><b>Project Perception</b>                  The municipal office of the ombudsman, as a body of large influence on the community, has stated its will towards cooperating with the project.</p>		
SUMMONED	ATTENDEES	IMAGE FILES
MUNICIPAL MAYOR'S OFFICE OF YACUANQUER	TOTAL PARTICIPANTS: 7 Among others: Mayoress: Jacqueline	


DATE: 05/04/16	Castillo Planning Secretariat 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
<p>Participants' concerns</p> <p>Road safety Project location The representative from the Yacuanquer Mayor's Office stated that the village of Innatas Bajo contains a zone that has been identified for rural housing, a project that has been requested to be part of the studies.</p>		<p>CVUS answers</p> <p>Some of the measures addressed in the Management Plan and the Social Management Programs are mentioned. They explain that the project is currently in the pre-construction phase, where work is being done to obtain the final design studies. Aforementioned project will be taken into account for review in the studies.</p>
<p>Project Perception</p> <p>The mayoress of Yacuanquer and her work group have acknowledged that the positive impact on their communities begins from the project, and have stated their support to the process.</p>		
SUMMONED	ATTENDEES	IMAGE FILES
MUNICIPALITY OF YACUANQUER OMBUDSMAN	<p>TOTAL ATENDEES: 5 Among others: Manuel Herrera - Municipal Ombudsman 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	
DATE: 11/05/16		
Participants' concerns		CVUS answers

<p>What properties will be affected directly by the construction of the road and its operation.</p>	<p>It is stated that the Environmental Impact Assessment (EIA) seeks to establish an understanding of the impacts on biotic and abiotic and social-economic environments, and to establish an environmental management plan that allows for mitigation or compensation in case it is necessary. In regard to the property process, it is explained that the goal is to achieve a fair process within the regulation in force.</p>	
<p><b>Project Perception</b> The municipal ombudsman answers its questions during the encounter and identifies the contributions the road project has brought to the region.</p>		
SUMMONED	ATTENDEES	IMAGE FILES
<p>TANGUA MUNICIPALITY MAYOR'S OFFICE</p> <p>DATE: 05/04/16</p>	<p>TOTAL ATTEENDEES: 9 Among others: Government Secretariat UMATA Planning Secretariat 'Unión del Sur' Road Concession Environmental Consultation Group (Geminis Consultores Ambientales S.A.S,</p>	
<p>Participants' concerns</p> <p>Environmental impact of the project. Property aspects</p>		<p>CVUS answers</p> <p>Within the framework of the Environmental Impact Assessment (E.I.A.), the impacts are identified with the various technical areas and, in addition, assessed with the communities in the socialization activities and the proper handling is established. They state that property management is</p>

subject to the regulation in place within the framework of a negotiation, which seeks the well-being of the community and the viable execution of the project.

**Project Perception**

The local authority highlights the benefits of the project, however, suggestions are given for the development of the same in the environmental and social economic aspect.

SUMMONED	ATTENDEES	IMAGE FILES
TANGUA MUNICIPALITY OMBUDSMAN	TOTAL ATTENDEES: 5 Among others: Cristian Enríquez Municipal Ombudsman 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
DATE: 10/05/16		

**Participants' concerns**

Considering local labor for the time of construction of the road.


**CVUS answers**


It is important for assistance to be provided from the different means of contact with the community in order to orient and support the filing of the village inhabitants' resumes in the area of influence; it has also been stated that it is important to encourage training by the National Education Service (SENA, from its Spanish acronym), in order to have qualified and certified labor, guaranteeing an excellent job in the construction stage.

**Project Perception**



The municipal ombudsman stated its availability to work as a team on the development of the project, as they understand the benefits for the community.

SUMMONED	ATTENDEES	IMAGE FILES
<p>PASTO MUNICIPALITY MAYOR'S OFFICE</p> <p>DATE: 07/04/16</p>	<p>TOTAL ATTENDEES: 9 Among others: Mayor Pedro Vicente Obando Mayor's Office Advisor Infrastructure Secretariat Communications 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	
<p>Participants' concerns</p> <p>Definition times for the final and construction designs. The Pasto City Hall has expressed its awareness of the "Pre-Council" condition in some communities, hence it considers feasible to develop a new prior consultation process, apart from highlighting the responsibilities of the Ministry of the Interior and the Government in regard to indigenous community affairs.</p>		<p>CVUS answers</p> <p>All of the inputs necessary to create the definitive design as soon as possible are available, however, it is necessary to consider the processes with the ethnic communities. Once the designs have been determined and the Environmental License has been obtained, it is expected that the construction period will last approximately four years.</p>
<p>Project Perception</p> <p>The local authority highlights the importance of the institutional work for the project, expressing its support and availability thereto.</p>		

SUMMONED	ATTENDEES	IMAGE FILES
<p>PASTO MUNICIPALITY OMBUDSMAN</p> <p>DATE: 10/05/16</p>	<p>TOTAL ATENDEES: 4 Among others: Viviana Ruales - Municipal Ombudsman 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	
<p>Participants' concerns</p> <p>It would be important to identify the villages in the area of influence that would have an impact on the construction of the road in order to visualize the supporting actions for the community.</p>	<p>CVUS answers</p> <p>Clarification is provided on the seven municipalities of the area of influence and that the project is currently in an assessment and prior design phase, therefore the Environmental Impact Assessment tool is expected to assist in the decision-making process toward the definitive design to visualize the operations plan to be developed in the area of influence; it is stated that until the final designs are available, communication will be established with the municipal authorities and the communities to submit said final design and environmental management plans for the biotic, abiotic and social-economic environments.</p>	
<p>Project Perception</p> <p>The municipal ombudsman has stated concern over the management of the social impacts, considering that while it is a fact that project benefits are visible, there needs to be careful management of the impacts. It has also stated support toward the development of the road project.</p>		

Source (Geminis Consultores Ambientales, S.A.S. 2016)

Concerns formulated by the regional and local authorities in the area of influence for the Pedregal - Catambuco section.

The surveys collected were arranged into six (6) analysis categories and are listed in a largest to smallest sequence among the summoned government and local authorities, including those listed below:

#### Technical project concerns

The technical concerns were the most commonly asked by the participants, among which are the time required to obtain the final designs and the construction of the road, on the new tools and road safety.

'Unión del Sur' Road Concession explained that the project is currently in the pre-construction phase, where technical assessments and designs are underway along with a licensing process through the EIA, which is a decision-making tool for the project and is required to obtain the final design, therefore no specific times can be given; environmental license approval will be granted by ANLA.

In regard to road construction time, the licensee answered that the expected duration of the construction process will be four years. Also discussed was the location of the two toll stations on the road and some management measures, such as proper signaling, to take into account around the issue of road safety.

#### 2. Concerns on property management

In regard to property aspects, the participants queried about the number of properties to be intervened and the property acquisition process. 'Unión del Sur' Road Concession informed that there is an area in charge of property management, subject to the regulations in place, which will seek a fair agreement, striving for the welfare of the community and the viable execution of the project, and until there is a definitive road

plan and the properties to intervene are identified, an accompaniment process will be established for the communities in order to set management agreements.

#### Concerns on the hiring of labor in the project

The authorities discussed the importance of considering local labor during the construction period of the road, to which 'Unión del Sur' Road Concession replied that priority will be given to the inhabitants of the area of influence of the project toward employment; their resumes will be received by telephone and mobile offices. Moreover, training will be encouraged by the National Education Service (SENA) in order to guarantee excellent performance during the construction phase.

#### Environmental concerns:

In regard to environmental issues, CORPONARIÑO stated concern facing the Environmental Alternative Diagnosis, to which the licensee answered that the initial policy maker escalated the query to ANLA, which is the point of reference for the preparation of the EIA.

In general terms, the participants were concerned about the environmental impact of the project, to which the Licensee replied that the impacts had been identified within the framework of the EIA and management measures are suggested with the participation of the communities, which will be submitted to the authorities and communities with the final results thereof.

#### 5. Ethnic communities:

The Pasto Departmental and Municipal Government Authorities discussed the handling of ethnic communities potentially present in the territory of the area of influence, and suggested actions be taken with the relevant national authorities for proper handling, to which the Licensee stated that it is undertaking pertinent formalities before the Ministry of the Interior in order to establish the location of the ethnic communities over the territory of the area of influence of the project, and will similarly proceed to prior consultation with the competent authorities, if necessary.

#### 6. Concerns facing municipal projects

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The representative from the Yacuanquer Mayor's Office stated that the village of Innatas Bajo contains a zone that has been identified for rural housing, a project which has been requested to be part of the studies and design of the project. The 'Unión del Sur' Road Concession replied they will pay attention to the above.

Initial socialization of the EIA in minor land units in the area of influence.

Below is a list of the concerns of the participants in the minor land units of the area of influence, which shows the significant participation of the community-based organizations such as Joint Action Committees, the Aqueduct Boards and other types of important institutions, thus submitting the answers of 'Unión del Sur' Road Concession - CVUS. (See Table 5.3.4 Table 5.3.5, Table 5.3.6, Table 5.3.7) Community attendees.

Table 5.3.4 Community attendees from the municipality of Imués

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
IMUÉS	Village of Pilcuán	06/04/16	<ul style="list-style-type: none"> <li>Joint Action Committee</li> <li>Community at large</li> <li>'Unión del Sur' Road Concession</li> <li>Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</li> </ul>	65
Participants' concerns			CVUS answers	
<p>In regard to the design of the road, the plans to be used for building are the ones existing on the ANI page.</p> <p>Possible modification of the current road.</p> <p>The community is also concerned about the hiring of personnel for road construction</p>			<p>There is a preliminary design, which may vary or not from the base design which is shown on the ANI page, considering the previous studies currently underway.</p> <p>Curvature radii will be enhanced, among others.</p>	

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			and SENA trainings.	
			They explain that one can see the information on the licensee's website or in the mobile office which is always present and driving around the region. It is noteworthy to mention that the trainings will meet the specifications SENA has established for their execution.	
Project Perception: The community has stated its interest for the development opportunities suggested in the road project.				
Image files				
				
IMUÉS	Pedregal	12/04/16	<ul style="list-style-type: none"> <li>• I.E. Jesús del Gran Poder</li> <li>• Joint Action Committee</li> <li>• Community at large</li> <li>• 'Unión del Sur' Road Concession</li> <li>• Environmental Consultation Group Geminis Consultores Ambientales</li> </ul>	84
	UF 4			


MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			S.A.S.	
<p>Participants' concerns            Speculations have been made around the road plans and certain interference of water sources, forests and neighboring homes is foreseen when heavy trucks drive by. The community highlights labor opportunities</p>			<p>CVUS answers            Pertains to the community Information and Participation Program through which it is possible for the community to permanently receive official communications regarding the road project, thus avoiding any speculation. It is stated that there is yet to be a final design and that the Environmental Impact Assessment (EIA) underway seeks to suggest alternatives and environmental management measures to create the least possible impact on the area.            Information is provided on the agreement entered into with SENA to train the inhabitants and encourage the potentially required profiles for road construction; moreover, the delivery of resumes through the licensee's website is encouraged.</p>	
<p>Project Perception            The community has stated its concern regarding the economic impact; nonetheless, it acknowledges the development of the region through the project.</p>				
<p>Image files            Pedregal</p>				

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
				

Table 5.3.5 Community attendees from the municipality of Yacuanquer

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
YACUANQUER	Inantas Alto	05/04/16	<ul style="list-style-type: none"> <li>• Joint Action Committee</li> <li>• Community at large</li> <li>• 'Unión del Sur' Road Concession</li> <li>• Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</li> </ul>	27
Participants' concerns Final design of the works			CVUS answers A final design has not been reached yet as the current status is the study stage,	



MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
<p>The importance of caring for the natural environment</p>		<p>however, it will be delivered to the communities as soon as it is approved and definitive. The environmental management plan establishes actions to prevent, mitigate, compensate, control, correct potentially negative impacts caused by the development of the project.</p>		
<p>Project Perception The community has stated its agreement with the development of the project, and suggests an adequate handling of the impacts in the stages of the project.</p>				
YACUANQUER	Inantas Bajo	05/04/16	<p>Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	59
<p>Participants' concerns Project design.</p>		<p>CVUS answers There is no final design of the project at this time; work is currently underway, considering that this design is based on the recognition of the context, which is made through the EIA, which is additionally a tool for decisions to be made regarding the project and a first instance for the filing of the environmental license before the National Environmental Licensing Authority (ANLA, from its Spanish acronym).</p>		
<p>Project Perception</p>				
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MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
The community has stated its support to the road project, identifying impacts around its development and suggesting ongoing communication to understand the progress status.				
Image files				
Inatas Alto			Inatas Bajo	
				


Table 5.3.6 Community attendees from the municipality of Tangua

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
TANGUA	Cocha Verde	05/04/16	Municipal Council Municipal Ombudsman Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	29
Participants' concerns			CVUS answers It is said that there is currently no	
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MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
Road design Job application			definitive design of the road and that as soon as the final designs are available, they will be delivered to the community. Local labor from the region will be hired and the inhabitants of the roadway corridor will be given special attention, therefore it is necessary to deliver resumes to the web page or via the mobile offices, whose information is in the fliers that were handed out during the meeting.	
Project Perception The community is motivated by the development opportunities envisioned in the road project.				
TANGUA	Tablón Obraje	15/10/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	25
Participants' concerns Housing required by the road project			CVUS answers They explain that when the houses to be intervened are identified, different processes will take place, such as the commercial negotiation of the properties, which will be conducted within the framework of the regulations in place; the real estate association will conduct the appraisal and will subsequently negotiate with the owners of the property. In addition, there is an assistance program for social-property	

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			management.	
<p>Project Perception</p> <p>The community acknowledges the benefits and makes suggestions for proper management of the impacts identified with the project.</p>				
TANGUA	San Pedro Obraje	08/04/16	E.S.E. Tangua Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	37
<p>Participants' concerns</p> <p>Ways to participate in the project</p>			<p>CVUS answers</p> <p>Pertains to the community encounter spaces to conduct the EIA workshops; in addition to this, the community is invited to the user support program, training and awareness of the community living in the vicinity of the project, labor engagement, information and community participation and road culture.</p>	
<p>Project Perception</p> <p>The community is motivated and participative, stating its support to the project.</p>				
TANGUA	Municipal Capital of Tangua Neighborhoods Corazón de Jesús, Fatima		Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
	and Bolivar			
<p>Participants' concerns</p> <p>Job opportunities</p> <p>Project start date and duration</p> <p>Potential impacts environmental impact produced by the development of the works, particularly in regard to its hydro resources.</p>			<p>CVUS answers</p> <p>It is said that resumes are received via the web page and, moreover, an invitation is sent out to the training session offered by the National Education Service (SENA) in order to train the community, thus qualifying the labor from the citizens from the neighboring area near the project.</p> <p>There is no exact time frame because the pre-construction phase encompasses prior studies, compilations and analysis of the results in order to determine the design, which is to be later approved by ANI to obtain the ANLA environmental license and to continue to the construction phase.</p> <p>Once the Environmental impact has been identified by the EIA professionals with the approval of the community, an Environmental Management Plan will be formulated as the set of measures and activities oriented to preventing, mitigating, correcting or compensating the impact produced during execution of the work. Hydro-Resource Management is part of the Environmental Management Plan</p>	
<p>Project Perception</p> <p>The community answers many questions regarding the project and discussion during the meeting raises development opportunities by way of the project, as well as recommending the proper management of any identified impact.</p>				

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
TANGUA	El Vergel	05/04/16	Joint Action Committee HMV Auditor Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	26
<p>Participants' concerns The community highlights the characteristics of the terrain in its village, its instability and the damages that may arise. Job training</p>			<p>CVUS answers 'Unión del Sur' Road Concession seeks to identify this type of knowledge in order to suggest alternatives with the team of professionals responsible for the Environmental Impact Assessment, thus formulating the Environmental Management Plan, which is the set of measures and activities oriented to preventing, mitigating, correcting or compensating the impact produced in the execution of the work. It is said that work will be executed jointly with SENA in order to conduct said training sessions, targeting local labor, and in order to have more labor opportunities as the project so demands, that is, in the construction phase.</p>	
<p>Project Perception The community has proven to be participative and helpful, as well as motivated by the opportunities the project has created for the region.</p>				
TANGUA	Buena Esperanza	02/05/16	ICBF (Colombian Family Welfare Institute) Joint Action Committee	26
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MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
Participants' concerns  Final road segment and access to the village			CVUS answers  The project is currently in the pre-operation stage, pre-construction phase where the studies and designs are prepared, as well as access to the villages. The community will be informed of the definitive road layout, its mobility features in the zone and access to their village once the process has taken place.	
Project Perception The community explains its concerns and states its support to the activities developed by the project.				
TANGUA	Cebadal	08/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	73
Participants' concerns The age to apply for a job and the requirements to have access to a working contract. Mobilization of the community due to			CVUS answers It is stated that the process is in abidance by the National Policy for employment, explaining that the candidate shall be of adult age, applying as indicated on the	

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
property intervention.			web page and having the required profile. They explain that there is an assistance program for social-property management where a team of social professionals is there to support the transfer process, before, during and after the same.	
<p>Project Perception</p> <p>The community states the project benefits and answers questions assertively, striving to suggest the handling of potential impacts with the project.</p>				
TANGUA	Chaves		Health Center Municipal Council Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	27
<p>Participants' concerns</p> <p>Property acquisition</p> <p>The community expresses the need for assistance in terms of SENA training and the filling out of resume forms, as well as its request to disseminate the job opportunities available in the project around several media.</p>			<p>CVUS answers</p> <p>The intent is to act in abidance by the regulations and with fair actions, which have to be performed with previous studies in order to make the best decisions and maintain or improve the current conditions.</p> <p>Orientation is provided by way of the mobile or fixed offices and from user support phone lines made available by the licensee, for close assistance.</p>	
<p>Project Perception</p> <p>The community states it concern for active involvement in project activities,</p>				
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MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
acknowledging the needs of the region that the project will help solve.				
TANGUA	Tambor	29/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	22
Participants' concerns Labor enrollment opportunities, training and age limit			CVUS answers SENA will be the agency in charge of training and certification for employment; the first step is to visit the Licensee's website to fill out the resume form. Furthermore, the community can rely on the support of the professionals available at the mobile units, who will frequently answer the community's questions.	
Project Perception The community indicates its willingness to support the road project, acknowledging its benefits.				
TANGUA	El Paramo 5.1	24/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	51
Participants' concerns Priority will be given to indigenous individuals or disabled persons for hiring			CVUS answers Contracting shall be conducted according to the required profile and certified	


MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
<p>purposes. Support available for the improvement of access roads into the village, which would have a positive impact on product trade.</p>			<p>training the individuals have. As soon as a definitive design is available, the access roads to the intervened villages will be disclosed and shall abide by the management plan; however, should there be no intervention, there will be no contractual obligations thereof.</p>	
<p><b>Project Perception</b> The community at large envisions the project as an opportunity for local development, which has an influence on the quality of life of its inhabitants.</p>				
TANGUA	La Palizada 5.1	27/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	27
<p>Participants' concerns The project will consider the improvement of alternate roads Local work-force engagement The community expresses the difficulty of access to the internet from their village</p>			<p>CVUS answers The signed agreement does not include the construction of alternate roads, which hinders work progress; nonetheless, the community can ask the Municipal City Hall for assistance as the competent authority for such purpose. The resumes of the community inhabiting the project area of influence will be taken into account; they are invited to undertake the process by filling out the resume form on the web page. The community may address the user support office or the mobile offices to ask</p>	

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			for any assistance required.	
<p>Project Perception</p> <p>The community envisions the project as a development opportunity and establishes its availability for participation in the various phases of the project.</p>				
TANGUA	Marqueza Bajo 5.1	27/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	38
<p>Participants' concerns</p> <p>Incorporation of a sewage system, since all the community has for now are septic tanks. Water management</p>			<p>CVUS answers</p> <p>The community is encouraged to participate and the leaders to achieve said improvements to their village, explaining that activities will be managed insofar as there are direct impacts from the project.</p> <p>The EIA will enable the creation of a management plan that will be executed including the water component.</p>	
<p>Project Perception</p> <p>The community identifies the project as a means to continue other development projects in their village with joint support.</p>				
TANGUA	Los Ajos 5.1	28/04/16	Joint Action Committee HMV Auditor Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	19

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
<p>Participants' concerns Labor enrollment There is a possibility to obtain resources for the enhancement of social infrastructure works with the project.</p>			<p>CVUS answers Resumes are to be uploaded on the licensee's website, giving priority to the inhabitants of the area of influence and explaining that the community may address the user support office or the mobile offices in order to receive the support they require. The institutional support program assists the community in managing its project achievements; however, they explain that there are no direct resources planned for such purpose.</p>	
<p>Project Perception The community acknowledges the various needs of the region and establishes the possibilities for development through the road project. They express their interest in participating in the project.</p>				
TANGUA	Marqueza Alto 5.1	29/04/16	<p>Joint Action Committee Aqueduct Management Board Ombudsman Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.</p>	50
<p>Participants' concerns The road design and the houses that may potentially be intervened. Number of jobs to be granted for each village in the area of influence.</p>			<p>CVUS answers It is explained that at the time there is no final design available, therefore there is no exact information regarding the houses intervened. This information will be made available as soon as the</p>	

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			definitive designs are ready. At the time there is no number of requirements and everyone will have the opportunity to participate in the process.	
<p><b>Project Perception</b> The community states its interest to participate in project activities, and explains the benefits of the project, as well as contributing toward the management of the activities thereof.</p>				
Image files				
Tablón de Obraje	Buena Esperanza de Tangua	Cebadal		
				
El Tambor	El Páramo	Marqueza Alto		
				

Table 5.3.7 Community attendees from the municipality of Pasto




MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
PASTO	Gualmatan Alto 5.1	2/05/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	38
Participants' concerns Property acquisition Management of traffic detours at the time of construction			CVUS answers It is explained that the project is currently in a pre-construction phase for studies and technical designs, where it is not possible to provide information on the intervened properties because there are no approved designs to speak of, but as soon as they are available, the process will take place according to the regulations in force. An efficient road-management plan will be suggested for traffic.	
Project Perception The community makes observations and suggestions on the road project and shows its willingness for the activities proposed.				
PASTO	Vocacional 5.1	6/04/16	Corrector Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	12
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MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
Participants' concerns Road layout			CVUS answers At the time there is a preliminary design and, once the definitive design is available, it will be communicated to the community.	
Project Perception The community states its interest for the development of the project, as it is viewed as a growth possibility. The questions asked are answered during the meeting and the executor gains the trust of the attendees.				
PASTO	Cubijan 5.1	4/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	53
Participants' concerns The community is concerned about the environmental impacts and their management.			CVUS answers The Environmental Impact Assessment allows to identify the project impacts and, from its results, to design an Environmental Management Plan and thus apply for an Environmental License.	
Project Perception The community establishes an open dialogue in the search for support in the construction of alternatives for environmental and social management. This is an indicator of the will towards the road project.				
PASTO	La Merced 5.1	4/04/16	Joint Action Committee Consortio S H Community at large 'Unión del Sur' Road	76

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
Participants' concerns Road design Properties to purchase for the project			CVUS answers The design is in construction and is expected to be approved by the National Infrastructure Agency, in order to be communicated to the community. The current legal framework will be the reference for the purchase of properties and only the necessary number according to project design will be purchased, addressing the issue of negotiation and purchase of properties at such time when the final designs are available.	
Project Perception The community has shown its willingness to support project activities, participating at actively and dynamically during the meeting.				
PASTO	San Jose de Catambuco 5.1	4/04/16	Joint Action Committee Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	26
Participants' concerns The importance of caring for natural resources is highlighted, since the forests for wood extraction are practically depleted and Miraflores river is contaminated. The community states that the place called La			CVUS answers It is said that the Environmental Management Plan shall contemplate the management measures for the impacts identified, which would be caused by the development of the project.	



MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
<p>Cascada, which is used for crop irrigation, should be protected</p>				
<p>Project Perception The community makes suggestions for environmental management of the possible impacts observed, such that they recognize the development to be brought forth for the region through the road project and show their will and support for the joint construction of alternatives facing the needs of the various phases of the project.</p>				
PASTO	Catambuco Centro 5.1	26 /05/ 16	Municipal Council Joint Action Committee Corrector Community at large 'Unión del Sur' Road Concession Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	52
<p>Participants' concerns On the management plan.</p>			<p>CVUS answers The importance of the Environmental Impact Assessment is stated in order to identify impacts and build an environmental management plan that allows the establishment of agreements with the communities.</p>	
<p>Project Perception The community has stated its will to participate in the project, given that it visualizes its benefits for local development.</p>				
PASTO	Huertecillas 5.1	6/04/16	Joint Action Committee Aqueduct Management Board Community at large 'Unión del Sur' Road Concession	25

MUNICIPALITY	MINOR LAND UNIT	SOCIALIZATION DATE	PARTICIPANTS	No. ATTENDEES
			Environmental Consultation Group Geminis Consultores Ambientales S.A.S.	
Participants' concerns Road layout			CVUS answers There is currently a preliminary design and when the final road design is available, it will be communicated to the community.	
Project Perception The community establishes a space for cooperation in the preparation of the EIA, and states its interest for ongoing communication of the road project advancements.				
Image files				
Vocacional	La Merced	Huertecillas		
				

Source (Geminis Consultores Ambientales, S.A.S. 2016)

The meetings scheduled for the dissemination of the initial Environmental Impact Assessment with the leaders from the Joint Action Committees and the community at large took place in an efficient manner, allowing to convey clear information and for the Licensee to solve questions. The most common questions in the communities in regard to the road project are shown below. The answers collected are arranged into five (5)

analysis categories and are presented in sequence from highest to lowest frequency, as explained above:

#### Technical project concerns

The queries on technical aspects by the participants were recurring, including investigations regarding the project starting time and duration, and similarly requested information on the final design of the project and its connection with the existing plans on the ANI page for the Rumichaca - Pasto project. On another note, they suggested considering pedestrian walkways and bike routes.

In regard to aforementioned concerns, 'Unión del Sur' Road Concession stated that programs will be undertaken in regard to road safety education, and explained that contractually speaking, the Concession does not contemplate the construction of pedestrian ways within scope.

In regard to the project time-line, they explained that the project is currently in the pre-construction phase, where technical designs and studies are taking place, and which are the base for the environmental licensing process and for ANI's approval on the definitive project layout, thus beginning the construction phase. Therefore, due to the variables involved in achieving the license and final design, the times vary but it is then explained that the phases subsequent to pre-construction are construction and maintenance.

In regard to the design suggested by ANI, it is stated that this input was the base for the study and there may be variations according to the EIA results, which is a decision-making tool available to the project for the management of the environmental license, before ANLA.

Questions on labor enrollment during the project construction phase.

On the other hand, the community constantly stated its interest in participating during the road construction stage, and asked about the requirements and nomination processes; the Licensee informed that the process is framed within the National Policy for employment and explained that the individuals have to be of adult age and to apply as indicated through the Licensee's web page; furthermore, it was informed that there is

support available to process the resume forms at the mobile stations, through the telephone user-support lines, or at the Operations Control Center of the village of Capulí (Iles).

Furthermore, it was informed that priority will be given for employment to the people living in the project area of influence. On another note, the communities were encouraged to be part of the training to take place thanks to the agreement with SENA to train the inhabitants in the area of influence on the profiles required at the time of construction.

Information materials were handed out containing information on user-support points, telephone and web assistance and mobile and fixed offices.

**Environmental concerns:**

The communities are concerned about the impacts relative to water sources, forestry species, soil and air, as well as on the environmental management to be established thereto.

The Licensee explained that EIA seeks to identify, assess and analyze the impact on biotic, abiotic media and the social-economic aspect in order to subsequently determine the management to develop for them; thus, it is an essential input to make decisions on the project and to request the Environmental License before ANLA. On another note, the Environmental Management Plan is the set of measures and activities oriented to prevent, mitigate, correct or compensate the impacts produced during the execution of the work, whereas water-resource management, as well as air, soil and others, are all part of the Environmental Management Plan where, upon results are available, they will be conveyed to the communities for general information purposes.

**Concerns on property management**

In regard to property management, the communities queried on the properties that would be required for the road project, the property acquisition process, property appraisals and the purchasing and transfer process.

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'Unión del Sur' Road Concession clearly explained that at the time the properties to be intervened have not been clearly and directly identified because this decision depends on the final layout. It was stated that as soon as these have been identified, adequate processes would take place for the commercial negotiation of the properties, which will take place within the framework of the regulations in place; they state that there will be agencies conducting the appraisal and, subsequently, negotiations will be undertaken with the owners of the properties. The licensee explained that there is an assistance program for social-property management where a team of social professionals is there to support the transfer process, before, during and after the same.

#### Concerns in regard to the project, inherent to the municipalities or communities

Some communities in the minor territorial units in the area of influence, that have specific needs in regard to community infrastructure, sewer and alternate roads to the village, submitted their support requests for these works. In regard to this point, the Licensee stated that when the final design is disclosed, the infrastructure under impact will be identified directly in order to establish management alternatives thereof.

In regard to the improvement of alternate roads, the Licensee expressed that the contract entered into does not include alternate roads, therefore it impedes such task; however, the community may request the work from the Municipal City Hall as the competent authority for that purpose and, moreover, the community was encouraged to work with its leaders to achieve other improvements in the village, such as the sewer system.

#### Community Participation Workshop Moment

This space was one for collective building and was intended for the participation of the communities in the area of influence in their own classification, such that a vision, experience and understanding of the territory was obtained for analysis under the light of the official information in the social-economic aspect in this EIA. Having said that, it was also possible to identify, together with the communities, the possible impacts caused by the Rumichaca - Pasto double-lane road project, specifically on the Pedregal - Catambuco section, for which it was necessary to establish different tools such as: the preparation of the talking maps, landscape assessment, ecosystem service workshops,

construction of the village data-sheet and impact identification workshop. Below is a list of the content of each one:

Preparation of the Talking Map: A tool used to graphically identify the location of the places and significant spaces of the minor territorial units. The communities were asked to create their maps, highlighting the locations of economic, cultural, and religious and athletic importance, among others.



Image 5.3.11 Cebadal village talking map  
 Flat Coordinates Origin Magna Colombia West N: 614595,3962 E: 965571,013  
 Date 30/09/2016  
 Source (Geminis Consultores Ambientales, S.A.S. 2016)

Landscape Assessment Workshop: The community assessed the spaces identified during the talking map exercise (vegetation cover, degree of intervention, bodies of water, ground contours, cultural elements and liveliness of the landscape), thus highlighting those of highest benefit to the communities, key elements for the subsequent construction of each of the aspects under study.



Image 5.3.12 Innantas Alto Village 05/04/2016

Alto 05/04/2016

Flat Coordinates Origin Magna Colombia West N 609806,3385 E: 959493,0855

Source (Geminis Consultores Ambientales, S.A.S. 2016)

Ecosystem Services Workshop: A space where the community identified, within the existing ecosystems in the area, the services (rivers, plantations, grasslands, natural forests, natural recreation, bare lands, populated centers) offered.



Image 5.3.13 Innantas Bajo Village 05/04/2016

Flat Coordinates Origin Magna Colombia West N: 609038,7095 E: 960481,0295

Source (Geminis Consultores Ambientales, S.A.S. 2016)

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Village Data-sheet Processing: A meeting space with the various members of the communities where they filled out the village characterization sheet for social-economic aspects, with previously established questions, in order to acknowledge aspects observed in the village such as: historical, demographic information, public utilities, social, education and health services, property and housing information, social and community infrastructure, economy, organizations and community representation, information media for the communication of cultural aspects and the environmental component.



Image 5.3.14 El Páramo Village

24/04/16

Flat Coordinates Origin Magna Colombia West N: 619802,5931 E: 975776,2706

Source (Geminis Consultores Ambientales, S.A.S. 2016)

Impact Identification Workshop: Conducted in order for the community to identify the possible impacts the road project may generate on biotic or abiotic media and the social-economic aspect. Three work groups were arranged for this activity, each one seeking dialogue and debate within the small groups on an assigned topic: biotic, abiotic (physical) media or social-economic, and each group was given small tokens with a distinctive color for each media and marker, in order to write down each of the impacts identified with each of the activities in the various project phases. After the debate, each group presented its conclusions during a plenary meeting; the participants proceeded to stick their tokens on a billboard previously located for each of the media

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facing the attendees, and finally the community's participation was registered in the Minutes.

It is necessary to explain that this venue took place during a dissemination encounter, due to the persistent request by the communities to optimize the meeting times due to their labor obligations and the lack of ability to obtain recurring permits from their bosses for attendance to several meetings.



Image 5.3.15 Impact Workshop Cubijan Village  
 Flat Coordinates Origin Magna Colombia West N: 620092,5271 E: 971737,4085  
 Source (Geminis Consultores Ambientales, S.A.S. 2016)

#### Results from the community impact workshop

It is noteworthy to mention that this was a space for free participation by the inhabitants of the area of influence; it took place under the methodology presented in this study (see Chapter 2.3), which allowed to collect and validate the impacts identified by the project, where the attendees themselves visualize the various phases.

The results obtained in the identification and assessment workshops on community impact were arranged and systemized during the post-field phase for the analysis included in this section of the document. The analysis resulted in the matrix presented in Table 5.3.8 and it includes the categories obtained from the impacts identified by the participants from each of the minor territorial units; the total presented pertains to the

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amount of reiterative answers by the community over the total number of minor land units participating in the workshop; moreover, each of these values is assigned a percentage which allows for comparison and to create conclusions on the study.

Table 5.3.8 Impact observed by the community in regard to the project

Environment Component	Element	Environmental impact	MAJOR UNITS		LAND
			IMUÉS UF 4	YAQUANQUER UF 4	
Biotic Media	Ground ecosystem	Vegetable cover	Pilcuán		
			Pedregal		
			Inantás Bajo		
			Innantas Alto		
			Cocha Verde	X	
			Tablón Obraje		
			San Pedro Obraje		
			Municipal Core		
			El Vergel	X	
			Buena Esperanza		
			El Cebadal		
			Chaves	X	
			El Tambor	X	
			El Páramo		
			La Palizada		
			Marqueza Bajo		
			Los Ajos		
			Marqueza Alto		
			Gualmatan Alto		
			Vocacional		
			Cubijan		
			La Merced	X	
			San José		
			Catambuco 5.1		
			Huertecillas 5.1		
TOTAL	4/25	3/25		TOTAL	
	16%	12%		%	

Environment Component Element	Environmental impact	LAND																									TOTAL	%	
		IMUÉS UF 4					YAQUANQUER UF 4					TANGUA UF 4					TANGUA UF 5.1					PASTO UF 5.1							
		Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco	Huertecillas 5.1			
	Restoration of native and introduced species	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X			17/25	68%
	Deforestation of trees and native and introduced plants	X	X	X	X	X	X	X	X		X	X				X		X	X	X	X	X		X	X	X		19/25	76%
	Reduction of the availability of ecosystem service	X		X	X		X			X	X												X		X		8/25	32%	

Environment Component Element		Environmental impact	MAJOR UNITS		LAND	
Wildlife species	Animal crossin	X	Pilcuán	IMUÉS UF 4	YAQUANQUER UF 4	
	Loss of green areas		Pedregal			
	Intervention of medicinal plants, trees, crop interventions)		Inantás Bajo			
	Intervention of potential protected areas		Innantas Alto			
	Loss of green areas	X	Cocha Verde			
	Intervention of potential protected areas		Tablón Obraje			
	Loss of green areas		San Pedro Obraje	TANGUA UF 4		
	Intervention of potential protected areas		Municipal Core			
	Loss of green areas		El Vergel			
	Intervention of potential protected areas		Buena Esperanza			
	Loss of green areas		El Cebadal			
	Intervention of potential protected areas		Chaves			
	Loss of green areas		El Tambor			
	Intervention of potential protected areas		El Páramo	TANGUA UF 5.1		
	Loss of green areas		La Palizada			
	Intervention of potential protected areas		Marqueza Bajo			
	Loss of green areas		Los Ajos			
	Intervention of potential protected areas		Marqueza Alto			
	Loss of green areas		Gualmatan Alto			
	Intervention of potential protected areas		Vocacional			
	Loss of green areas		Cubijan			
	Intervention of potential protected areas		La Merced	PASTO UF 5.1		
	Loss of green areas		San José			
	Intervention of potential protected areas		Catambuco 5.1			
	Loss of green areas		Huertecillas 5.1			
	TOTAL					
	%					
	5/25	20%				
	1/25	4%				
	2/25	8%				

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MAJOR UNITS		LAND	TANGUA UF 5.1																								TOTAL			
Environment Component	Element	Environmental impact	IMUÉS UF 4		YAQUANQUER UF 4								TANGUA UF 4								TANGUA UF 5.1								PASTO UF 5.1	%
		signaling	Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco 5.1	Huertecillas 5.1			
		Migration of animals, including native species			X	X			X	X			X	X	X	X	X	X	X	X				X	X	X			15/25	60%
		Death of animals														X					X							2/25	8%	
		Stress of the livestock, which has an impact on the low milk produc															X											1/25	4%	







MAJOR UNITS	LAND	Environment Component	Element	Environmental impact	Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catalina	Catambuco 5.1	Huertecillas 5.1	TOTAL	%			
																															IMUÉS UF 4	YAQUANQUER UF 4	TANGUA UF 4	TANGUA UF 5.1	PASTO UF 5.1
c	c	and Geospherical	Economy Landscape	water																															
				Water-flow reduction									X	X							X		X					X							
c	c	and Geospherical	Economy Landscape	Air contamination	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	24/25	96%	
				Noise contamination	X		X		X					X				X	X							X		X	X		X			11/25	44%
c	c	and Geospherical	Economy Landscape	Intervention on land contour															X														2/25	8%	
				Landscape improvements				X	X																			X							4/25
c	c	and Geospherical	Economy Landscape	Job creation	X		X	X	X	X	X	X	X	X	X				X	X	X	X	X	X					X	X	X	X	X	21/25	84%



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Environment Component Element	Environmental impact	IMUÉS UF 4		YAQUANQUER UF 4		TANGUA UF 4					TANGUA UF 5.1					PASTO UF 5.1		TOTAL	%									
		Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco 5.1	Huertecillas 5.1		
	Trade increase			X	X							X	X	X	X		X	X	X			X					10/25	40%
	Possibility to create trade establishments				X																			X			2/25	8%
	Tourism promotion							X	X	X	X	X						X	X				X				8/25	32%
	Cost of living increase		X											X										X			3/25	12%
	Implementation of a Toll, which increases		X																								1/25	4%

MAJOR UNITS	LAND	Environment Component	Element	Environmental impact	
ENVIRONMENTAL IMPACTS	IMUÉS UF 4	Pilcuán			
		Pedregal			
	YAQUANQUER UF 4	Inantas Bajo	X	X	
		Innantas Alto	X	X	
	TANGUA UF 4	Cocha Verde	X	X	
		Tablón Obraje	X	X	
		San Pedro Obraje	X	X	
		Municipal Core	X	X	
	TANGUA UF 5.1	El Vergel			
		Buena Esperanza			
		El Cebadal			
		Chaves			
	PASTO UF 5.1	El Tambor			
		El Páramo			
La Palizada					
Marqueza Bajo					
Los Ajos					
Marqueza Alto					
Gualmatan Alto					
Vocacional					
Cubijan					
La Merced					
San José					
Guacatambuco					
Catambuco 5.1					
Huertecillas 5.1					
TOTAL					

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MAJOR UNITS		LAND		IMUÉS UF 4		YAQUANQUER UF 4		TANGUA UF 4		TANGUA UF 5.1		PASTO UF 5.1		TOTAL	%															
Environment Component	Element	Environmental impact	Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco 5.1	Huertecillas 5.1			
		Difficulty for pedestrian transit							X						X						X					X			5/25	20%
		Intervention of the existing roads for mobility at the time of construction							X	X						X													3/25	12%
		Intervention of access														X									X				2/25	8%
		Improvement of the roads used								X											X								2/25	8%



MAJOR UNITS		LAND		IMUÉS UF 4		YAQUANQUER UF 4		TANGUA UF 4		TANGUA UF 5.1		PASTO UF 5.1		TOTAL		%														
Environment Component	Element	Environmental impact	Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco 5.1	Huertecillas 5.1			
		for the project																												
		Ease of transportation for individuals			X																								1/25	4%
		Impact on health caused by contamination															X		X					X					3/25	12%
		Increased road safety						X				X				X	X	X	X					X	X			8/25	32%	
		Road insecurity for animal	X						X		X		X								X			X	X			7/25	28%	





MAJOR UNITS		LAND		IMUÉS UF 4		YAQUANQUER UF 4		TANGUA UF 4		TANGUA UF 5.1		PASTO UF 5.1		TOTAL	%															
Environment Component	Element	Environmental impact	Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco 5.1	Huertecillas 5.1			
		Mobilization of people due to the intervention of housing with the Project	X	X	X				X	X			X		X	X					X				X	X			12/25	48%
		Housing Demolition										X									X			X	X		X		5/25	20%
		Reduction of land tenure			X										X	X							X		X				5/25	20%
		Property appraisal				X										X					X					X			4/25	16%

Environment Component Element	Environmental impact	IMUÉS UF 4		YAQUANQUER UF 4		TANGUA UF 4		TANGUA UF 5.1		PASTO UF 5.1		TOTAL	%																	
		Pilcuán	Pedregal	Inantas Bajo	Innantas Alto	Cocha Verde	Tablón Obraje	San Pedro Obraje	Municipal Core	El Vergel	Buena Esperanza	El Cebadal	Chaves	El Tambor	El Páramo	La Palizada	Marqueza Bajo	Los Ajos	Marqueza Alto	Gualmatan Alto	Vocacional	Cubijan	La Merced	San José	Catambuco 5.1	Huertecillas 5.1				
Adaptive and Cultural Element	Land Unit Development	X			X		X	X		X													X	X					10/25	40%

### Analysis of results from the workshop on impact assessment with the community

According to the results from the impact workshop conducted with the communities in the area of influence, certain relevant elements have been identified in biotic, abiotic and social-economic media, which may be intervened through the project; therefore, it is necessary to establish specific management activities and to prevent, mitigate and offset the impacts identified.

#### Abiotic Media

The communities have identified the possible contamination of the air for about 96% of the land units, suggesting to properly manage the impact generated both during the construction phase with material and construction management, and the transportation of the same, and for the operation and maintenance phase, when there will be a larger flow of vehicles that will contaminate with gases and air; 12% of the minor land units which correspond to Marqueza Alto, Marqueza Bajo and La Merced, have identified negative impacts on health by contamination.



Second, 72% have identified the impact of contaminated water due to the possible interaction with dust, oil or other materials involved in the construction process; furthermore, 40% have stated a potential loss of the bodies of water including streams and cisterns, among others, which are necessary for everyday use. On the other hand, 20% acknowledge the impact of water flow-rate reduction, which has an impact on the communities lifestyle. Water channeling is important for 16% of the participating communities.

Soil erosion represents 32%, which pertains to the results caused by the changes of the soil properties, and 20% have identified the impact of landslides.

As impacts of lesser frequency there is a reduction of soil productivity for crops (8%), adequate waste management (4%), interference with the ground contour (8%), the improvement of the landscape (16%), and the study of micro-basins (4%).

#### Biotic Media

Out of all of the participating minor land units, 76% highlighted the deforestation necessary for construction, which is related to the felling of trees and native plants, or species introduced in the area of influence; another 32% are in connection with the reduction of medicinal plants and crop interventions, which will render lesser availability for humans.

Thus, 68% of the minor land units identifies a positive impact in the reforestation of trees, native plants and introduced plants, especially when this activity is conducted in the vicinity of bodies of water or aqueduct inlet pipes, as the community have stated that some trees help preserve water sources.

In regard to fauna, 60% of the participating communities have observed the emigration of native species such as squirrels, 'chiguacos', owls, 'raposas', and wolves among others, due to the noise generated, the change of habitat, deforestation, and contamination among others. However, another 20% have mentioned the positive impact of signaling of animal crossings, which improves road safety for the animals in the area.

In a lower proportion, the communities highlight the impacts of Re-vegetation (8%), the loss of green spaces (8%) used for children's recreational purposes, the possible intervention of protected areas (4%) in the case of Cocha Verde reservation, animal deaths (8%) and the stress generated which has a negative impact on dairy production (4%).

**Social Economic Setting:**

For the social economic setting 64% of minor land units stated that the road will make it easier to move agricultural products and other goods to market and will likewise benefit people with shorter commutes, which for 40% will entail cultural exchange and development, the 40% mentioned an increase in trade which translates into economic development for the zone. Thirty-two percent (32%) of the land units state that due to the high technical specifications of the road there will be greater road safety, which will guarantee a reduction in accidents, in opposition to 28% of communities that foresee an increase in road hazards for animals and persons. Twenty percent (20%) commented on the difficulty for pedestrian traffic, among them the Municipality of Tangua, municipal capital and el Tambor, and the municipality of Pasto: Gualmatan alto, San José de Catambuco, and Catambuco. Inasmuch as the municipal capital of Tangua the community's concern has been identified as relating to how people commute to the educational institution, which currently requires people to cross the existing road with a high degree of danger.

On the other hand, 48% of participating communities comment on the impact stemming from the displacement or transfer of families to other places due to the project's land affectation, which means they will have to adapt to their new habitat. Regarding the latter, they point to the impact resulting from the modification to homes caused by vibrations and the use of explosives (28%) and demolition of homes (20%) which entails the uprooting of their chattels and the changes in the dynamics of the population. Likewise, for 20% the reduction in land holding, due to the project's land affectation, means a change in their ways of life customs; for its part, insecurity due to theft in the village on account of the easiness of access by outsiders (24%) was considered a negative impact, although the valuation of the land was identified as positive for 16% of participating communities.

Regarding the economy of the population in the communities, they highlight that the road makes it possible to visualize positive impacts, thus 32% of the communities acknowledges the fostering of tourism given the affluence of people moving through the road and 8% identifies the possibility of creating commercial spaces; associated to this 12% mentions the impact on the cost of living, given the greater demand for goods and services, as well as the inclusion of a toll which increases traveling expenses (4%).

Among other impacts identified with less prevalence in the minor territorial communities there are described longer commutes to and from (4%), intervention to existing roads for mobility during construction (12%), intervention of access roads (8%), improvement to roads used in the project (8%), facilities to transport the infirm (4%) and possible maintenance to the sewage network during the construction of the project (8%).

As a conclusion of this analysis it is possible to state that the communities visualize greater impacts on the biotic medium and they are concerned over how to manage water, air, and noise pollution as well as the handling of waste resulting from excavations and construction, and secondly, they are concerned about the deforestation and reforestation the project necessarily entails; the first is associated to the modification of the habitat of animals which can generate their migration and the second which could potentially come from the manner in which air and noise pollution is handled, as well as a benefit for the conservation of water resources.

Finally, the communities identify the mobilization of people as a significant impact due to the modification of their way of life and customs associated to project activities, but identify as positive impacts an increase in commerce, easiness of transportation, jobs, among other; that in a cost/benefit assessment, (it tells of a) general feeling of calm among the population because they visualize development in the project's land units.

· 5.3.1.2 Socialization of EIA Results

Socialization of the EIA's results started on October 5, 2016, in communities and the area of influence of the Pedregal – Catambuco section; they were attended by Unión del Sur Road Concession, environmental consulting group Géminis Consultores Ambientales S.A.S, regional authorities such as CORPONARIÑO, the Government of (the Department of) Nariño, local authorities such as City Halls and Ombudsmen of the

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major land units in the area of influence (Imués, Yacuanquer, Tangua, and Pasto), as well as the inhabitants of the community in general and the minor land units of the area of influence.

The methodological procedure for the socializations of EIA results is organized in three moments described below:

- Moment of Call
- Moment of Socialization
- Moment for the analysis of information

- *Moment of Call*

The call for socialization spaces of the EIA, was made according to that described in item 5.3.1 of this chapter.

- *Moment of socialization of EIA results*

The socializations of EIA results began on October 05, 2016, with communities in the area of influence of the Pedregal – Catambuco section, with the participation of:

- Unión del Sur Road Concession
- Intervener’s Office
- Social environmental consultancy office of Géminis Consultores Ambientales S.A.S
- Government Organizations such as CORPONARIÑO, Government of Nariño
- City Halls and Ombudsmen Offices, major land unites in the area of influence (Imués, Yacuanquer, Tangua, and Pasto)
- Inhabitants of the community in general of minor land units in the area of influence.

The goal of this socialization was to present the EIA results in the abiotic, biotic, and social-economic settings, stressing on the impacts as identified and the measures for environmental management established in the study, as well as to present on the compensations due to the loss of biodiversity, investment of 1% and the risk management plan; to that end audio-visual resources were used, for efficient conveyance and presentation of the information as well as the appropriation of the


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information by the community, among them: PPT Presentation (attachment 5.3.1 ppt2), video beam, flyers from the concessionaire with general project information, including a web page, mobile offices, and contact telephones for direct community attention. It is worth noting that during the socialization important concerns by the participants were addressed, as recorded in the Minutes prepared *in situ* and signed by the representatives (attachments 5.3.1 act2)

- *Results of the socialization of EIA results*

Table 5.3.9.2 below, presents the Socialization of EIA results with authorities and shows the main concerns by the government and municipal authorities that participated during the socialization of the EIA results.

Table 5.3.1.2 Socialization of EIA results with regional authorities



CALLED	ATTENDANTS	RECORD
GOVERNOR'S OFFICE NARIÑO	TOTAL ATTENDANTS: 14 Among them: <ul style="list-style-type: none"> <li>· Governor in charge - Dr. Mario Benavides</li> <li>· Secretary of Infrastructure Dr. Diego Arcos</li> <li>· Secretary of social development - Dr. Martin Tenganá</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores Ambientales S.A.S)</li> </ul>	
DATE: 26/10/16		
<i>Concerns from participants</i>  1 Definitive design		<i>Responses by the CVUS</i>  1. It is clarified that with respect to the definitive design of units 1, 2,

CALLED	ATTENDANTS	RECORD
2 Over natural reserves 3 Prior consultation processes 4 Road construction start date	<p>and 3, it is so because the ANI is currently reviewing the proposal presented with the adjustments as requested. All the information is available and the team in charge is working on it, once a decision is made it will be made available to the municipal authorities and the community of AID.</p> <ol style="list-style-type: none"> <li>2. It is informed that the secondary information was consulted and information was obtained from municipal authorities to identify the protected area fieldwork was conducted to characterize it.</li> <li>3. It is informed that the prior consultation process with the City Councils as certified by the Ministry of the Interior, Montaña de Fuego and Catambuco have begun.</li> <li>4. Licenses and other environmental permits are previously required and that once the date is known it will be informed.</li> </ol>	
<p><i>Project Perception</i>            The regional authority seems willing to cooperate as necessary with the road project. Likewise, it makes suggestions as to how to manage the impacts to the various environments.</p>		
CORPONARIÑO	TOTAL ATTENDANTS: 23 Among them: · Eng. Fernando Burbano,	



CALLED	ATTENDANTS	RECORD
2/11/2016	<ul style="list-style-type: none"> <li>· Eng. Hernán Rivas</li> <li>· Eng. Iban Muñoz</li> <li>· Eng. German Bastidas</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores Ambientales S.A.S)</li> <li>· Interventoría</li> </ul>	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. About management programs for biotic, abiotic, and social-economic settings.</li> <li>2. About the management of ethnic communities.</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. Details are presented on how to manage the programs for the biotic, abiotic, and social-economic settings.</li> <li>2. A presentation is made on the program carried out with the ethnic communities in the area of <b>influence</b>, making an emphasis on the process carried out by the Ministry of the Interior in Functional Units 4 and 5.1.</li> </ol>
<p><i>Project Perception</i></p> <p>The environmental authority mentions its support to the project and states an interest in having the EIA, to the extent it's finished, as it is an important input to carry out the various actions by the authority in the region.</p>		


Table 5.3.2.2 Socialization of EIA results with local authorities in the area of influence


CALLED	ATTENDANTS	RECORD
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<p>MAYOR'S OFFICE MUNICIPALITY OF IMUÉS</p>	<p>TOTAL ATTENDANTS: 10 Among them:</p> <ul style="list-style-type: none"> <li>• Mayor José Luis Tovar</li> <li>• Ombudsman Miller Díaz</li> <li>• Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores Ambientales S.A.S., 2016)</li> </ul>	
<p>25/10/2016</p>	<p><i>Responses by the CVUS</i></p> <p>1 Final layout will be socialized during a new meeting until such time as the approved design is received from the ANI, this meeting will take place with institutions and communities in the area of influence.</p>	
<p><i>Concerns from participants</i></p> <p>1 Final layout</p>		<p><i>Responses by the CVUS</i></p> <p>1 Final layout will be socialized during a new meeting until such time as the approved design is received from the ANI, this meeting will take place with institutions and communities in the area of influence.</p>
<p><i>Project Perception</i></p> <p>The local authority states its interest in learning about the progress of the project in an ongoing basis.</p>		
<p>PERSONERIA MUNICIPIO DE IMUÉS</p>	<p>TOTAL ATTENDANTS: 7 Among them:</p> <ul style="list-style-type: none"> <li>• Municipal Ombudsman: Miller Díaz</li> <li>• Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores Ambientales S.A.S)</li> </ul>	
<p>13/10/16</p>	<p><i>Responses by the CVUS</i></p>	
<p><i>Concerns from participants</i></p>		<p><i>Responses by the CVUS</i></p>



<p>1. The Ombudsman highlights the importance of people from the community</p>	<p>1. A presentation is made on the goal and process to hire personnel for the construction phase of the project thanking the support expressed by the municipal authority.</p>	
<p style="text-align: center;"><i>Project Perception</i></p> <p>The municipal ombudsman's office states to support the project and appreciates the informative and participation gathering.</p>		
<p>MAYOR'S OFFICE MUNICIPALITY OF YACUANQUER</p>	<p>TOTAL ATTENDANTS: 10 Among them:</p> <ul style="list-style-type: none"> <li>· Mayoress: Libia Jaqueline Castillo</li> <li>· Planning Secretary</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores Ambientales S.A.S)</li> </ul>	
<p>18/10/16</p>		
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Final layout in the El Placer sector.</li> <li>2. Management of bodies of water to be affected in the area of influence.</li> <li>3. The planning secretary requests more information on investment plan of 1 %.</li> </ol>	<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. Explains that final layout will be socialized in a new meeting, referred to as kick-off, which is to be convened with authorities and communities of the area of influence.</li> <li>2. The environmental professional explains management plans for hydric resource.</li> <li>3. Explains the investment plan of 1% and clarifies its characteristics.</li> </ol>	
<p><i>Project Perception</i></p> <p>The local authority states its support for the road project and seems active and cooperative during the socialization.</p>		
<p>OMBUDSMAN'S OFFICE MUNICIPALITY</p>	<p>TOTAL ATTENDANTS: 5 Among them:</p> <ul style="list-style-type: none"> <li>· Ombudsman: Manuel</li> </ul>	

OF YACUANQUER	Herrera · Unión del Sur Road Concession	
13/10/16	· Environmental Consulting Group (Géminis Consultores Ambientales S.A.S)	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>The Ombudsman requests to have on hand a plan to manage the care for the municipal infrastructure, such as the aqueduct and sewage system.</li> <li>The municipal ombudsman states his concern with respect to the hydric sources and natural resources that are to be intervened, stating his concern for the proper management of these resources.</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>Measures are presented that are going to be implemented for the care and management of the sewage system and the aqueduct, the plan by the consultant is also made known, about watching over the care of the infrastructure to be intervened, which are part of the programs and strategies contained in the previous studies.</li> <li>It is clarified that the environmental management plan seeks to watch over the care and adequate management of the resources.</li> </ol>
<p style="text-align: center;"><i>Project Perception</i></p> <p>Participation and cooperation with the project is evidenced by the permanent contributions by participants, the intention is thus to establish permanent communication about the progress of the project.</p>		
MAYOR'S OFFICE & ADVOCATES OFFICE MUNICIPALITY OF DE TANGUA	TOTAL ATTENDANTS: 17 Among them: · Mayor of Tangua Carlos Emilio Guerrero · Municipal Ombudsman	

13/10/16	<p>Cristian Camilo Enríquez</p> <ul style="list-style-type: none"> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group Géminis Consultores Ambientales S.A.S</li> </ul>	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. The Mayor of the municipality requests to learn the definitive layout.</li> <li>2. The project has established compensation measures.</li> <li>3. The municipal ombudsman is concerned about the process being carried out with the indigenous communities.</li> <li>4. The Mayor asks when will the construction phase begin?</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. The definitive layout will be informed later.</li> <li>2. It clarifies that compensations observes the current norms and these are included in the PMA</li> <li>3. He says that the Ministry of the Interior is conducting the prior consultation process with the indigenous communities.</li> <li>4. It is clarified that prior to the construction phase the communities will be informed as well as the competent authorities as to the start date, which is still pending.</li> </ol>
<p style="text-align: center;"><i>Project Perception</i></p> <p>The local authority seems interested in learning of the progress in the road project and also makes suggestions for the EIA and other project activities.</p>		
<p><b>PASTO CITY HALL:</b> During the socialization cycle of EIA results, no meeting took place with that administration, because although it was coordinated and called by means of official letter GA-189-16, and filling N°14397 dated 18/10/2016, representatives from the administration failed to appear. However, a telephone was placed insisting on its rescheduling but due to prior engagements of the mayor, it was not possible to convene it. The support is found in annex 5.3.1ofi2/AlcPast2</p>		
<p>OMBUDSMAN'S OFFICE PASTO</p>	<ul style="list-style-type: none"> <li>• TOTAL ATTENDANTS: 4</li> </ul> <p>Among them:</p>	

18/10/16	<p>Secretary general of the Municipal Ombudsman's Office</p> <ul style="list-style-type: none"> <li>•Head of internal control</li> <li>•Unión del Sur Road Concession</li> <li>•Consorcio SH</li> <li>•Géminis Consultores Ambientales</li> </ul>	
<p>1. What are the environmental management plans contemplated to mitigate the impacts on the environment, flora, and fauna?</p> <p>2. What is the compensation plan for the biotic, abiotic, and social-economic settings?</p>	<p>1. A presentation is made of the strategies, previously designed, for the sustainable work, the care and the preservation of the natural resources, which may be affected during the execution of the project.</p> <p>2. The compensation plan is presented and it is clarified that there are authorities in charge of watching over their compliance such as the National Infrastructure Agency - ANI, and the National Environmental Licenses Authority -ANLA.</p>	
<p style="text-align: center;"><i>Project Perception</i></p> <p>The municipal ombudsman's office mentions its support and contributions to the EIA as conducted.</p>		

Likewise he communities in the area of influence called through the support from the Community Action Boards actively participated in socializing the EIA results, these meetings were also attended by community grass roots organizations such as the Aqueduct Boards and other. Table 5.3.1.3, shows the participants and present their main concerns, as well as the responses provided by the CVUS.

Table 5.3.1.3 Socialization of EIA results with the communities of Imués

Municipality	Minor Land	Socialization	Attendants	No.
		ENVIRONMENTAL IMPACT ASSESSMENT	VERSION 5	
			November 2016	
			Page 91	

	Unit	Date	Attendants
<b>IMUÉS</b>	Pilcuán	10/02/2017	<ul style="list-style-type: none"> <li>· Community Action Board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Consorcio SH</li> </ul>
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. How the project is going to mitigate the impact on hydric sources located in the sector.</li> <li>2. A request is made for information and socialization to the owners of the property impact, which would be generated by the Project.</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It is informed that according to the inventory of hydric sources measures will be taken into consideration to manage them, so as to generate the smallest impact on these hydric sources, mention is made of the importance of implementing the Environmental Management Plan during construction.</li> <li>2. The CVUS informs the process being carried out with the filling in of the property data sheets. Social and legal accompaniment will be conducted with the owners in a personal basis, as the condition of each varies.</li> </ol>

*Image file*



<b>IMUÉS</b>	Pedregal	8/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Consorcio SH</li> <li>· Géminis Consultores Ambientales</li> </ul>	50
	UF 4			

<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Community participation in the project</li> <li>2. What are the homes which will be relocated as a result of project works?</li> </ol>	<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It is explained that the CVUS, will continue to reach out and maintain permanent communication with the community to promote the on the progress of the project and encourage social participation.</li> <li>2. He clarifies the purpose of</li> </ol>
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	<p>the meeting and provides direction on the property management to take place in due time, with the owners, according to the norms in effect.</p>
<p><i>Project Perception</i> The community states satisfaction with the process as conducted on information and community participation in the road project.</p>	
<p><i>Image file</i></p> 	

Table 5.3.1.3 Socialization of EIA results with communities in Yacuanquer

Municipality	Minor Land Unit	Socialization date	Attendants	No. Attendants
YACUANQUER	Inantas Alto	5/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Consorcio SH</li> <li>· Géminis Consultores Ambientales</li> </ul>	24

<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. The water flow required for the project and its intended use.</li> <li>2. Uncertainty is stated with respect to the relocation of the toll and the possible negative impacts to community mobility.</li> <li>3. Deforestation process entailed by the project and the possible negative impacts to the environment.</li> <li>4. Job opportunities to be generated by the double lane project.</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. Information is given on the percentage of water flow requested from the corresponding environmental authority, which consists of between 1 to 1.5 liters. The intended use of these resources is likewise explained: industrial processes.</li> <li>2. The relocation of the toll in the current el Placer service station and the new mobility dynamics were explained.</li> <li>3. A presentation was made on the management plan for the biotic setting, which showed the community the compensation measures to be put in place to mitigate the negative impacts which could be generated to the environment. Additionally, great detail was afforded to explain the reforestation process to take place and for the protection of natural species in danger of extinction.</li> <li>4. A detailed explanation was made regarding the work hiring process and the documentation required.</li> </ol>	
<p><i>Project Perception</i></p> <p>The community seems at ease with the approach given to the concerns generated by the road project and shows itself active on the process so far, it identifies significant impacts for</p>				



regional development.				
YACUANQUER	Innatas Bajo	05/10/16	<ul style="list-style-type: none"> <li>• Community action board</li> <li>• Community at large</li> <li>• Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	48
	Uf4			
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. What is the management of the economic impact that the fruit merchants will have?</li> <li>2. Accompaniment to the property's social.</li> <li>3. The definitive layout</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. The impacts were previously identified and its management is contained in the Environmental Management Plan, specifically in the Support Program to the Institutional Management Capacity which contemplates the guides to and articulation with public and private institutions for the formulation of productive project.</li> <li>2. The community is provided an explanation on the accompaniment of the properties' social processes of which the Road Concession has taken charge throughout the project taking into account the population in the EIA.</li> <li>3. It is explained that once the environmental license is obtained from the National Environmental Licenses Authority and prior to the start of the construction activities a kick-off socialization activity will be</li> </ol>	

	conducted to learn about the layout as approved in its entirety.	
<p><i>Project Perception</i></p> <p>The community foresees positive impacts for itself from the project and also suggests an adequate management of the development process.</p>		
<i>Record</i>	<p><i>Innantas Bajo</i></p>  <p>Flat Coordinates Origin Magna Colombia West N: 609038,7095 E: 960481,0295</p>	<p><i>Innantas Alto</i></p>  <p>Flat Coordinates Origin Magna Colombia West N 609806,3385 E: 959493,0855</p>

Table 5.3.1.3 Socialization of EIA results with communities in Tangua

Municipality	Minor Land Unit	Socialization date	Attendants	No. Attendants
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<b>TANGUA</b>	<b>Cocha verde</b>	07/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	34
	UF5			
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Intervention of the road arriving into the village of Cocha Verde.</li> <li>2. Returns, accesses, and abscissas of functional unit 4.</li> </ol>			<p><i>Responses by CVUS</i></p> <ol style="list-style-type: none"> <li>1. It is explained that it will not be impacted, because the construction of the second lane will be mostly terraced to the existing road.</li> <li>2. An explanation is given on the returns corresponding to UF 4, also highlighting the PR of Pedregal.</li> </ol>	
<p><i>Project Perception</i></p> <p>The community seems at ease for the development of the project and states its participation in the remaining activities.</p>				
<b>TANGUA</b>	<b>El tablón Obraje</b>	15/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	25
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. The community wishes to know the new mobilization routes to enter and exit the</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. The projected designs are shown, which do not greatly</li> </ol>	

<p>municipality of Tangua, Pasto, and Rumichaca</p> <p>2. Relocation of the population due to the construction of the project.</p>	<p>alter the old mobilization routes; likewise, the community is informed that the road studies and designs will be socialized in detailed at a later meeting together with the technical team of the company.</p> <p>2. It is stressed that in future socializations, the social-property team in charge, will make a detailed presentation on the strategies and plans as drafted to solve any concerns over the relocation of the population. However, it states that the plan contemplates said impact.</p>
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*Project Perception*

The community states support for the activities in the road project, indicates active participation in the process.

<p><b>TANGUA</b></p>	<p><b>San Pedro Obraje</b></p>	<p>12/10/16</p>	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	<p>24</p>
	<p>UF4</p>			

*Concerns from participants*

1. Management in case of affectation of aqueduct and sewage services in the San Pedro Obraje village.
2. Mobility through toll to be located in the El

*Responses by the CVUS*

1. It is explained that in case of affectation of services by the project proper management will be carried

<p>Placer sector.</p> <ol style="list-style-type: none"> <li>3. Location of returns in the municipality of Tangua.</li> <li>4. Adaptation of roads arriving into the San Pedro Obraje village.</li> </ol>	<p>out.</p> <ol style="list-style-type: none"> <li>2. It is explained that the toll will operate in both directions of the road.</li> <li>3. A presentation is made to explain the accesses and returns corresponding to UF4.</li> <li>4. It is clarified that the said road will be used for the project and will be correspondingly adapted, otherwise it will not be intervened.</li> </ol>			
<p><i>Project Perception</i> The community solves its concerns and states interest to learn about the progress of the project in the same clear and effective manner.</p>				
<p><b>TANGUA</b></p>	<p>Municipal Capital of Tangua Corazón de Jesús, Fátima, and Bolívar neighborhoods</p>	<p>08/10/16</p>	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	<p>85</p>
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Which are the homes to be relocated?</li> <li>2. What is the management plan for mobility, because there is a toll managed by the community of the Municipality, which has increased the mobility of cargo vehicles, generating wear and affectation of near by homes.</li> <li>3. What is the environmental compensation plan?</li> <li>4. Job opportunities</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. The community is informed that there will be space in future socializations, in charge of the social-property teach, where there will be clarity about property-type matters and all concerns will be cleared.</li> <li>2. The programs contained in the Environmental Management Plan were informed, which takes into account the mobility and the traffic of dump trucks</li> </ol>		

	<p>to handle the articulated material and in furtherance of the project's construction activities the pertinent steps will be taken to prevent possible impacts.</p> <p>3. It is explained that once the Compensation Plan is approved by the Ministry, this matter will be made known to the environmental entities and local authorities. The Company states to be committed to keep the community informed, before, during, and after the completion of the project and it is essential to have the support of the population and the its social accompaniment and control.</p> <p>4. The social professionals explained the hiring policies used by the Concession in detail and reiterate, as has been mentioned in previous meetings, that the entity is committed to hiring directly from the community in the project's area of influence.</p>			
<p><i>Project Perception</i></p> <p>1. Participants resolve the concerns arising from the road project, for which the community requests to continue with the mechanisms allowing it to be kept permanently informed about the development of the project.</p>				
<p><b>TANGUA</b></p>	<p><b>El Vergel</b></p>	<p>05/04/16</p>	<p>Community action board</p>	<p>26</p>

			<ul style="list-style-type: none"> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Consorcio SH</li> <li>· Géminis Consultores Ambientales</li> </ul>	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Homes to be affected by the project</li> <li>2. Impact to properties from solid residues, liquids, floods and phenomena such as humidity and erosion</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It is clarified that the social-property technicians will conduct meetings to work the matter in detail. Mention is made of management actions adapted to the impacts as identified.</li> <li>2. A presentation is made of the studies conducted and the management plans, detailing the abiotic setting which contemplates the impacts mentioned by the community.</li> </ol>	
<p><i>Project Perception</i></p> <p>The community states to feel grateful for the clear information obtained on the progress of the project, they recognize its benefits for their community.</p>				
<b>TANGUA</b>	<b>Buena Esperanza</b>	14/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Road Concession Unión del Sur</li> <li>· Consorcio SH</li> <li>· Géminis</li> </ul>	20

			Consultores Ambientales	
<i>Concerns from participants</i>			<i>Responses by the CVUS</i>	
<ol style="list-style-type: none"> <li>Inhabitants in the village request attention to the water flow that supplies the municipal aqueducts, which are used in agricultural processes, so as to preserve them from any affection caused by the project.</li> </ol>			<ol style="list-style-type: none"> <li>They are told about the water flow that will be requested from the corresponding environmental authority and its intended use.</li> </ol>	
<i>Project Perception</i>				
The community identifies the opportunities for local development vis-à-vis the road project.				
<b>TANGUA</b>	<b>Cebadal</b>	08/10/16	<ul style="list-style-type: none"> <li>Community action board</li> <li>Community at large</li> <li>Unión del Sur Road Concession</li> <li>Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	35
	UF 5.1			
<i>Concerns from participants</i>			<i>Responses by the CVUS</i>	
<ol style="list-style-type: none"> <li>Impacts from the ZODMES.</li> <li>Hydric source referred to as “La Ladera” will be affected.</li> <li>Project start date.</li> <li>Properties’ acquisition process.</li> <li>The definitive layout.</li> </ol>			<ol style="list-style-type: none"> <li>The features of the environmental management plan to mitigate the impacts generated by the ZODMES are clarified.</li> <li>It is explained that said source Géminis Consultores Ambientales S.A.S., 2016, it was not defined for any use in the project.</li> </ol>	



	<ol style="list-style-type: none"> <li>2. It is clarified that there is no specific date for this, there are only contractual dates.</li> <li>3. It is explained that the properties will be purchased at market prices and not based on the cadaster estimate and will have a properties' portfolio and also, the CVUS will conduct social, legal, and technical accompaniment with all the social units to be relocated as a result of the road project.</li> <li>4. It is said that there are sections not objected to and others that are still pending approval by the ANI, they will be presented on to the community once they are approved.</li> </ol>			
<p><i>Project Perception</i> The community feels satisfied by the clarity in the management established by the EIA professionals. Likewise, is appears active and dynamic.</p>				
<b>TANGUA</b>	<b>Chaves</b>	11/10/16	<ul style="list-style-type: none"> <li>• Community action board</li> <li>• Community at large</li> <li>• Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	18
<p><i>Concerns from participants</i> 1. Flow requested from the Chaquita creek, and its environmental impacts</p>			<p><i>Responses by the CVUS</i> 1. The community is informed of the amount in liters that are</p>	

<ol style="list-style-type: none"> <li>2. Hiring policies for the double lane project.</li> <li>3. How many companies are part of the project?</li> </ol>	<p>going to be used as part of the project, that in the case of the la Chaquita creek, it could be of between 1 and 1.5 liters, which will be determined by CORPONARIÑO, at such time as the concession requests the water concession permit. Likewise, it informed on the plans and strategies designed to mitigate the negative impacts these processes could cause.</p> <ol style="list-style-type: none"> <li>2. The work hiring process was made informed and the legal requirements established.</li> <li>3. It is informed that the company that was awarded the double lane project is Unión del Sur Road Concession</li> </ol>
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*Project Perception*

The community indicates its interests in participating in the road project.

<p><b>TANGUA</b></p>	<p><b>Tambor</b></p>	<p>10/10/16</p>	<ul style="list-style-type: none"> <li>• Community action board</li> <li>• Community at large</li> <li>• Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	<p>44</p>
	<p>UF 5</p>			

*Concerns from participants*

1. Management of water springs and village aqueducts in the village of El Tambor, La Magdalena, and Buena Esperanza.

*Responses by CVUS*

1. It is explained that water springs will not be affected as

<p>2. Compensations for natural resources.</p> <p>3. A concern is advanced regarding the extraction of vegetation resulting from the construction of the double lane.</p> <p>4. The functionality of the current road following the completion of the Rumichaca Pasto Double Lane Project, and also the concern about the activities to be carried out to address the transit needs of the student community.</p>	<p>a result of the new road, also that the study on the occupation of the flow makes it possible to not generate impacts on village aqueducts.</p> <p>2. It is clarified that compensations will be effective as indicated in the norms established mainly for the use of the hydric resource.</p> <p>3. Regarding the species under a hunting prohibition, it is explained that the management plans allow for greater protection to be granted, it is likewise clarified that reforestation should make it possible to mitigate or compensate the impacts generated by said activities.</p> <p>4. It is explained that a new type of mobility will be generated that will guarantee the effective transit of any type of vehicle, people and/or livestock.</p>
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*Project Perception*

The community resolves its concerns and states some suggestions according to the impacts as visualized.

<p><b>TANGUA</b></p>	<p><b>El Páramo</b> <b>5.1</b></p>	<p>15/10/16</p>	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road</li> </ul>	<p>9</p>
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			<p><b>Concession</b></p> <ul style="list-style-type: none"> <li>Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>The community wishes to know the plans to protect the environment and for the care of the fauna present in the sector.</li> <li>The population states uncertainty with respect to the future of the families that are going to have to be relocated from their properties, with the construction of the double lane project.</li> <li>The population wishes to know the hiring policies for the double lane project.</li> <li>An inhabitant stresses the importance of the care of the population of hedgehogs.</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>The professional in charge socializes the compensation program, which goal is the preservation, care, and sustainable management of natural resources.</li> <li>The programs to accompany the social-property management are informed, as well as those who will subsequently socialize the plans and strategies as contemplated for these processes.</li> <li>Institutional agreements with SENA are made known, intended to train the population and enhance the community's possibilities for employment. Likewise, call center lines are made known, to receive comments, complaints, and claims by the population.</li> <li>The professional explains that there is a specific management plan for the fauna, which will seek to reduce the impacts on this biotic group and will promote the conservation and</li> </ol>	

		preservation of individuals with the help of the environmental education program.	
<p><i>Project Perception</i> The community establishes a space for collective construction to contribute toward the possible impacts caused by the road project.</p>			
<b>TANGUA</b>	<b>La Palizada</b> UF 5.1	22/10/16	<ul style="list-style-type: none"> <li>• Community action board</li> <li>• Community at large</li> <li>• Unión del Sur Road Concession</li> <li>• • Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1- Access to the village of La Palizada will undergo changes of location.</li> <li>1. Access to the village will have some sort of improvement in its conditions.</li> <li>2. Start date of construction phase.</li> <li>3. Purchase of homes.</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1- It explains how said access will not undergo any change of its location.</li> <li>1. It clarifies that if the access is used in project activities, it will be left in equal or better conditions.</li> <li>2. Again, it states that once the environmental license is obtained construction will begin, and clarifies that this will happen once the design may have been previously socialized to the communities.</li> <li>3. It explains the property acquisition process and the accompaniment program It explains the property</li> </ol>	

		acquisition process and the program to accompany the social-property program governing the process.		
<p><i>Project Perception</i> The project represents changes in the dynamics of the population who also welcomes local development.</p>				
<b>TANGUA</b>	<b>Marqueza Bajo</b>	11/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Village aqueduct board</li> <li>· Teachers education center</li> <li>· Mothers Heads of Household</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	46
	UF5.1			
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. The management of streams belonging to the village of El Tambor.</li> <li>2. The project will watch for the decontamination of the bodies of water from which the population collects the water taps for domestic use.</li> <li>3. Reforestation of the project</li> <li>4. Relocation of the population</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It is explained that the compensation plan makes it possible to minimize impacts to the bodies of water.</li> <li>2 It is explained that, regarding the domestic use of water, CORPONARIÑO is the responsible entity.</li> </ol>		

<p>5. When will selection of labor start?</p> <p>6. Final layout.</p>	<ol style="list-style-type: none"> <li>1. It is explained that the reforestation will be carried out in specific places that favor the dynamics of bodies of water close to the reforestation zones.</li> <li>2. It is explained that the social-property management will allow the accompaniment of owners.</li> <li>3. It is explained that the selection of labor will start once the project starts, however resumes must be submitted to the Mobile Unit of the CVUS and at the offices of user attention.</li> <li>4. It is explained that once the layout is fully approved by the ANI a new socialization meeting will take place to present said layout to the village community.</li> </ol>
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*Project Perception*  
 The community visualizes possible impacts and recognizes an adequate management as projected. It states its willingness and permanent participation with the project.

<p><b>TANGUA</b></p>	<p>Los Ajos</p>	<p>08/10/16</p>	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Village aqueduct board</li> <li>· Teachers at education center</li> <li>· Mothers Head of Household</li> </ul>	<p>20</p>
	<p>UF5.1</p>			

			<ul style="list-style-type: none"> <li>· Municipal Ombudsman</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. The Vice-president of the JAC (Community Action Board) poses a concern about how to manage the conservation of and the date to sample the hydric sources of UF5.</li> <li>2. On the access to the Los Ajos Village.</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It explains the ranges used to analyze samples taken in the field, also it clarifies that the use of these resources will be solely for industrial purposes and submits the dates for sample taking for the volumetric capacity performed on this functional unit which took place in April 18, 2016.</li> <li>2. The access to and exit from the village is explained, as well as the mobility to Ipiales and Pasto.</li> </ol>	
<p><i>Project Perception</i></p> <p>The community seems active and committed to the project, it is forthcoming in proposals and recognizes the project's benefit.</p>				



<b>TANGUA</b>	<b>Marqueza Alto</b>	<b>14/10/16</b>	<ul style="list-style-type: none"> <li>• Community action board</li> <li>• Community at large</li> <li>• Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	<b>25</b>
	<b>UF 5.1</b>			
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Start date for implementation of 1% investment plan.</li> <li>2. Mechanisms to access the courses that offer training to obtain job opportunities in the Rumichaca Pasto Double Lane road project.</li> <li>3. The road that allows access to the village will receive any sort of maintenance?</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It states that once the environmental licensing is obtained and following the completion of the works said plan will be implemented.</li> <li>2. It explains that the agreement between SENA and the CVUS makes it possible to record resumes, subsequently vacancies will be posted on both the SENA and CVUS websites. The requirements to access training courses is explained. It is clarified that the training is not subject to being hired, as the intention is to skill up the labor force and afford greater opportunities, not only with the concession but with any other company. It is recalled that the minimum number of places to carry out the training is 30 people.</li> <li>3. It is informed that if the said road is</li> </ol>	

			used as an alternate access road for the construction of the works it will be left in equal or better conditions.
<i>Project Perception</i>			
The community states interest in the hiring (process) for the project and its participation in it is permanent.			
<i>File</i>			
<i>Cocha Verde</i>	<i>San Pedro Obraje</i>	<i>Cebadal</i>	
			
<i>El Tambor</i>	<i>Los Ajos</i>	<i>Marqueza Alto</i>	
			

Table 5.3.1.3 Socialization of EIA results with communities in Pasto

Municipality	Minor Land Unit Menor	Socialization Date	Attendants	No. Attendants
PASTO	Gualmatán Alto	7/10/16	· Community action	33

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	<b>UF. 5.1</b>		<p>board</p> <ul style="list-style-type: none"> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Consorcio SH</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1. Definitive layout of the double lane.</li> <li>2. About the deforestation in the area of influence of the project.</li> <li>3. Employment.</li> </ol>			<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. It was clarified that the final design is the last stage of approval by the ANI, and that once approved, socialization will be carried out for the community to informed about it.</li> <li>2 Plans for the management of the biotic setting were presented, including the compensation activities to mitigate impacts.</li> <li>3. It explains the hiring process to take place and suggests to have filled in the totality of the required documents.</li> </ol>	
<p><i>Project Perception</i></p> <p>The community seems willing to participate and to work in the road project, it recognizes its contribution to the region.</p>				
<b>PASTO</b>	<b>Vocational</b>	15/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	25
	<b>UF 5.1</b>			
<p><i>Concerns from participants</i></p>			<p><i>Responses by the CVUS</i></p>	

<ol style="list-style-type: none"> <li>The cutting of brushy species will affect the hydric sources.</li> <li>Property purchase process.</li> </ol>	<ol style="list-style-type: none"> <li>It explains that the management plans of the study, proposes mitigation actions by means of reforestation activities and the protection of species under a prohibition to hunt, as well as for the management of hydric sources.</li> <li>It explains that the acquisition of properties will take place at commercial values and that a realtor will be hired to be in charge of the respective valuation.</li> </ol>			
<p><i>Project Perception</i> The community resolves the concerns generated by the project, in a receptive and participatory manner.</p>				
<p><b>PASTO</b></p>	<p><b>Cubijan Alto 5.1</b></p>	<p>14/10/16</p>	<ul style="list-style-type: none"> <li>Community action board</li> <li>Community at large</li> <li>Unión del Sur Road Concession</li> <li>Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	<p>28</p>
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>The community wishes to know the road design as stipulated for the village of Cubijan Alto</li> <li>Start date of construction works</li> <li>The president of the community action board, requests to implement measures of road safety, as well as to put signs and pedestrian ways to regulate the transit norms.</li> <li>Possible affectations to the municipality's public infrastructure: such as the sewage system and the</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>The community is informed that the design of the double lane in the section corresponding to the village runs parallel to Pan American road.</li> <li>The community is informed that the project stands in its pre-construction phase which intention is to obtain an environmental license, an essential requirement to start the works.</li> </ol>		

aqueduct		<ol style="list-style-type: none"> <li>2. It socializes the plans and measures for protection, stipulated for the biotic, abiotic, and social-economic settings.</li> <li>3. A presentation is made on the protection and management measures conceived in the prior studies, which intention is to mitigate the negative impacts which may occur with the road, access ways to the village, and the condition of the public infrastructure.</li> </ol>		
<p><i>Project Perception</i> The community is forthcoming with proposals and seeks to assertively (provide) feedback on projects executed and planned.</p>				
<b>PASTO</b>	<b>Cubijan Bajo</b>	22/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Consorcio SH</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	<b>64</b>
	UF 5.1			
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1 Definitive designs for double lane</li> <li>2 What are the measures to mitigate the environmental and social impacts of the project and the manner in which the community can participate in the surveillance, control, and compliance with the plans?</li> <li>3 Activities vis-à-vis the hydric resource.</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1 It clarifies that until such time as there is a definitive design, a technical team, will make a detailed presentation on the road studies and designs contemplated for Functional Unit 5.1, for consistency purposes, it clarifies that the environmental impact study, is an essential requirement to obtain the environmental license. And the design will have to be approved by the ANI.</li> <li>2 The measures to manage the biotic, abiotic, and social-economic settings are explained</li> </ol>		

		<p>and it suggests to contact the call center at: 018000187200, where comments, complaints, and claims will be received, likewise it informs about the existence of a mobile attention unit where the public may approach to receive information on the project.</p> <p>3. It clarifies the management plan for the hydric resource, which will have an investment of 1%, and will be intended for the sustainable care of these resources.</p>	
<p><i>Project Perception</i> The community states an interest to increase its participation in the road project.</p>			
<b>PASTO</b>	<b>La Merced 5.1</b>	14/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>• Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul> <p>47</p>
<p><i>Concerns from participants</i></p> <ol style="list-style-type: none"> <li>1 Design and location of pedestrian bridge.</li> <li>2 Possible relocations and purchase of properties.</li> <li>3 A village inhabitant asks whether the construction of the Rumichaca section has started.</li> </ol>		<p><i>Responses by the CVUS</i></p> <ol style="list-style-type: none"> <li>1. General information is presented and it is clarified that the definitive designs will be subsequently socialized with the works technical teams.</li> <li>2 The community is informed that a team of professionals will subsequently carry out the socializations to inform about the properties matter in detail.</li> <li>3 It is stressed that no work has yet begun as part of the double lane project.</li> </ol>	
<p><i>Project Perception</i> The community assertively states is concerns and clarifies, by adequately addressing them, being left at ease with the actions carried out thus far.</p>			
<b>PASTO</b>	<b>San José de</b>	21/10/16	<ul style="list-style-type: none"> <li>· Community action board</li> </ul> <p>26</p>

	<b>Catambuco</b>		<ul style="list-style-type: none"> <li>Community at large</li> <li>Unión del Sur Road Concession</li> <li>Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	
	UF. 5.1			
<p><i>Concerns from participants</i></p> <p>1. The president of the JAC requests further information on the hiring of labor for the project.</p>			<p><i>Responses by the CVUS</i></p> <p>1. It is explained that with the support of SENA, free courses are being delivered to train the community, likewise, a presentation is made on the hiring process by submitting resumes on the CVUS webpage.</p>	
<p><i>Project Perception</i></p> <p>The community states its interest to be engaged (work) in the project.</p>				
<b>PASTO</b>	<b>Huertecillas</b>		<ul style="list-style-type: none"> <li>Community action board</li> <li>Teachers at education center</li> <li>Mothers Heads of Household</li> <li>Community at large</li> <li>Unión del Sur Road Concession</li> <li>Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	20
	<b>UF5.1</b>	07/10/16		
<p><i>Concerns from participants</i></p> <p>1 A concern is raised on the relocation of warehouses.                  2 Impact to homes in the village of Huertecillas by the project.                  2 Hiring.</p>			<p><i>Responses by the CVUS</i></p> <p>1 The social-economic compensation plans will be developed according the norms in effect, and will be applied to owners with any production activity within the area of intervention.</p> <p>1. It is reiterated that homes will not be affected directly by the construction of the double lane.                  2. An explanation is given on the hiring</p>	

		<p>program currently being executed through the social management component. The Unión del Sur Road Concession is entering into an alliance with SENA to develop the courses to qualify the population to participate in the construction phase of the project.</p>		
<p><i>Project Perception</i> The community recognizes the advantages of the project and clears management concerns over possible impacts visualized by the community.</p>				
<b>PASTO</b>	<b>Catambuco</b>	29/10/2016	<ul style="list-style-type: none"> <li>· Community action board</li> <li>· Community at large</li> <li>· Unión del Sur Road Concession</li> <li>· Environmental Consulting Group (Géminis Consultores ambientales S.A.S)</li> </ul>	15
	<b>UF5.1</b>			
<p><i>Concerns from participants</i> 1. About the start of the works</p>		<p><i>Responses by the CVUS</i> 1. The (actual) start time of the project will be informed to the communities when it is defined. Everything depends on the process being carried out to obtain the environmental license, among other variables.</p>		
<p><i>Project Perception</i> The community seems willing to participate in the road project.</p>				
<b>File</b>				
Cubijan Bajo		La Merced		Gualmatan Alto





Source (Géminis Consultores Ambientales S.A.S., 2016)

From the EIA socialization meetings it is possible to state that technical concerns over the road design were cleared and proposals by the CUVS were accepted, however, they stated a wish for these designs to be presented again, specially if they include the important changes below, to which the CUVS said, that it will present those in detail once the designs are approved by the ANI, as part of the project information program prior to the start of the works.

For their part, the institutions and communities stated concerns about the environmental management of impacts as identified, to which the CVUS made a detailed presentation on the management plans for biotic, abiotic, and social-economic settings as proposed and which contemplate responses to impacts as identified with the project, easing concerns by communities in this regard.

Consistently with the EIA kick off socializations, the communities maintain their interest to be hired, to which CVUS, reiterated the processes necessary for this during the construction phase and constantly invited (communities) to use the call center lines, mobile offices, and the web page.

To conclude, it is highlighted that the meetings were completely carried out with the various social and institutional actors both in terms of participation, allowing for accuracy and expanding on the information of the Rumichaca - Pasto road project and on the EIA. Likewise, there was good receptivity in general terms toward the project, as the communities recognized the development that the double lane Rumichaca-Pasto will bring to the region.

### 5.3.2 Demographic component

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Insight into the make of the population, offers a fundamental view about its vital needs in the region. From the standpoint of demographic dynamics, the structure of the population expresses past trends and those that will be possible to expect.

Depending on the behavior of the components in demographic dynamics, the population will tend to disperse over the territory.

For major territorial units, the following aspects will be analyzed, vis-à-vis the project's conditions and demands: population dynamics, demographic trends, and the index of unsatisfied essential needs of the population. For minor territorial units a characterization will be made of population groups, population dynamics, demographic trends, manners of land holding, the presence of population in situation of displacement and settling patterns.

#### 5.3.2.1 Major territorial units

- *Functional unit 4*

o Municipality of Imués

ü Settlement dynamics

The population dynamics relates to the most important historical events that have had an effect on the regional population dynamics, identifying the type of population settled and the preeminent economic activities. The distribution among the rural and urban area will also be presented, including its density.

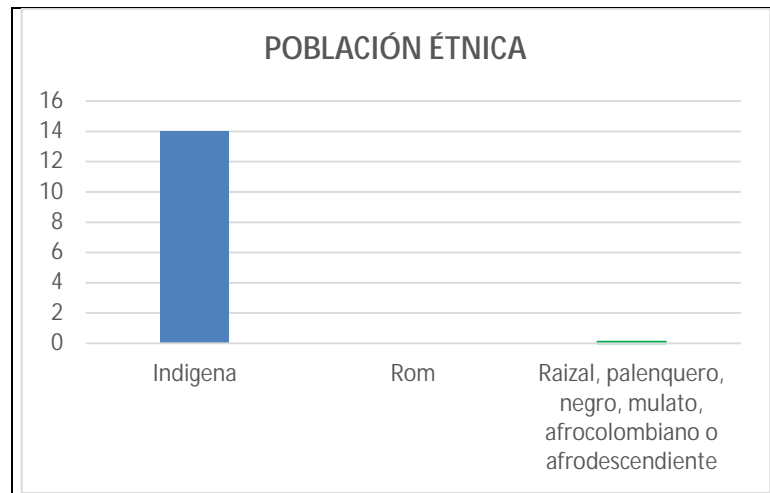
The municipality of Imués “was founded in the XVI century, in the year 1.572 by chieftain Carlos Quiscualtud of Imués, of whom it is said to have arrived with his family to settle this territory, as a strategic point because of the visibility in the event of an attack by his enemies. Likewise, this place of settlement enjoyed all the facilities necessary for daily living such as wood, water, land fit for agriculture. It is said that the Old Bolivar Road or Royal Road was the main way for access and communication with nearby towns. With the progressive arrival of other inhabitants, from neighboring towns, around the Guáitara river known as Quillacingas, as is the case of Guaitarilla, Ancuya, Consacá, Yacuanquer, Tangua, Samaniego, Funes, Contadero, and others, shaped the great family of the chiefdom of the time” (Alcaldía de Imues, 2016)

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“In the year 1849, the Municipality of Imués, was considered a province of the Túquerres municipality and from that time on was made into a Municipality of the Department of Nariño. Imués means Hidden Water, and tells the story, that in times of drought people used the hides and would trail up the hill to the place of las Vocanas where there was a spring of water and to avoid its drying up, would perform the corresponding rituals.” (Alcaldía de Imues, 2016)

The population dynamics of the Municipality of Imués has been influenced since old by the characteristics of the territory considered fit for providing the necessary elements to live comfortably, such as water, wood, and land fit for agriculture.

From the type of population settled, according to the characterization in Colombia there are distinguished three groups of communities. On the one hand, there is the indigenous population, afro descendants, raizales (creole), palenqueros, mulatos, or black and the Room or Gypsy community; for the municipality of Imués there is then, recognized, the existence of people belonging to indigenous reservations representing 14% of the total population, that is, approximately 1722 persons and 0.1% are afro-descendants as shown in Figure 5.3.3. The greatest number of indigenous inhabitants fall in an age range of between 20 and 59, with 830 inhabitants, followed in age range by those between 0 and 14, with 501 inhabitants (Plan de Desarrollo Municipal de Imués, 2012). That is, 85,9% of the population in the municipality of Imués is non-ethnic.



**Figure 5.3.1 Ethnic population municipality of Imués**

Source: (Plan de Desarrollo Municipal., 2012 )

According to the 2016 – 2019 Imués development plan, considering the population reduction in the Municipality of Imués starting in 1993, the following causes were established to explain the mobility of the population: the main is the lack of water that the abandonment of the country side has brought, that is, agricultural and animal raising activities. Another cause is the lack of opportunities in the region, for which many families left to seek new horizons in other municipalities of Nariño, the country in general, and other places in neighboring Ecuador.

The historians who narrate the mobility in this municipality refer that the inhabitants used the so-called old bolivar Road or Royal Road, trade they would do on foot, with teams of mules between neighbors of Túquerres and Quillacingas de Guaitarilla. Later, this barter trade of bales of hemp (Bags and Looms) for salt, brown sugar, gold, and other essential utensils of the day, extended to the cities of Pasto and Popayán. (Arteaga, Edgar, 2016). In other words, there is a historical precedent of commercial activity that was conducted in Imués. However, the municipality’s economy is based on the primary sector, agricultural subsector, which has characterized itself for the rudimentary small land-holding production, the use of family labor and scant use of technology, generating low productivity in their crops. Because of the entrenched geography, the land affected by erosion and its high aridity, the extension of land used in this activity is very reduced. Agriculture occurs around traditional customs, because of the lack of appropriate technology, the family orchard structure and limitations with support services (loans, technical assistance).

For decades, the main product was wheat, given the weather and the height, today the production of corn, split pea, and beans is important, as well as hemp (fique), tree tomato, barley, potatoes, manioc, cabbage, cherimoya, guava and white onion. All farming and harvesting processes still follow traditional methods using oxen for plowing with some use of tractors; there is no technology or collection centers. Cattle produces milk mainly (Plan de Desarrollo Municipal de Imués, 2012).

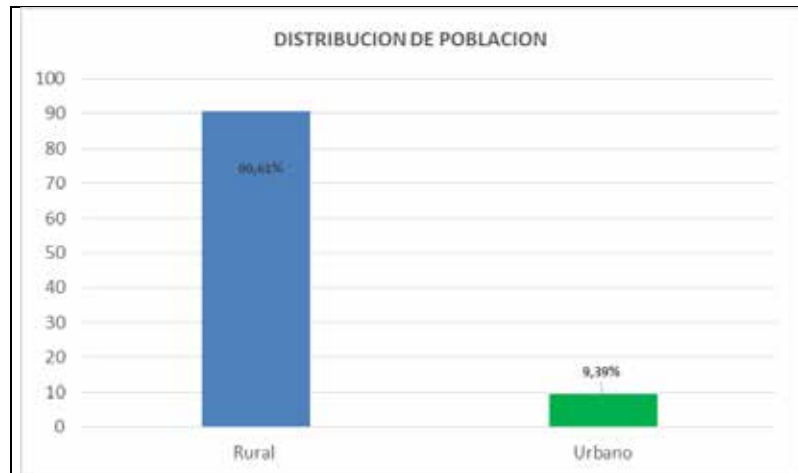
Regarding the secondary sector, there can be identified that the population is engaged in activities to transform fique, production of cheese and the manufacture of bricks. Inasmuch as mining, there are three stone quarries, located in Santa Clara, el Pedregal, and Pilcuan (Plan de Desarrollo Municipal de Imués, 2012).

Another important economic activity in the municipality is tourism, which has been gaining momentum making Pedregal, Pilcuan, and Santa Rosa into centers of attraction. These places have spas, hotels, restaurants, and sports courts, among other. Other attractions are the hills of Camuéstés and Gordo, the Santa Rosa lagoon, and the religious temples (Plan de Desarrollo Municipal de Imués, 2012).

#### Ü Demographic trends

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The population of the Municipality of Imués for the year 2016 is 6.131 persons, of which 9.39% live in the municipality's capital and 90.61% in the rest of the municipality, as shown in **Figure 5.3.4**; the average is of 3,8 people per household, that is, there are 1.769 households. The population density is 88 (Inhab/Km<sup>2</sup>).



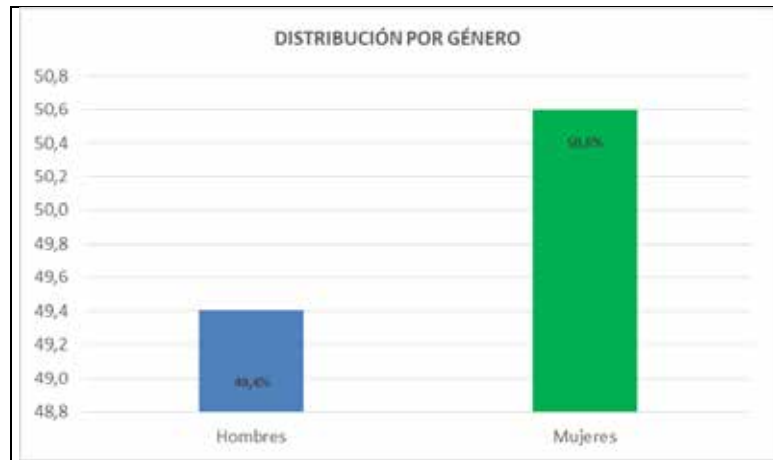
**Figure 5.3.2 Distribution of population in Imués**

Source (Plan de Desarrollo Municipal de Imués, 2012)

According to the above information, comparing the population in 2006 with the forecast for 2011, there is identified a decrease in the records of population in the urban and rural areas; by 2006 it was 7.387 persons and according to the 2011 forecast, it drops to 6.721 for total population.

The only thing that maintains the equivalence is the population rate in terms of males and females, as no significant differences are observed inasmuch as the number of people.

There are 3.029, corresponding to 49,4%, that are men and 3.102, representing 50,6%, that are women.



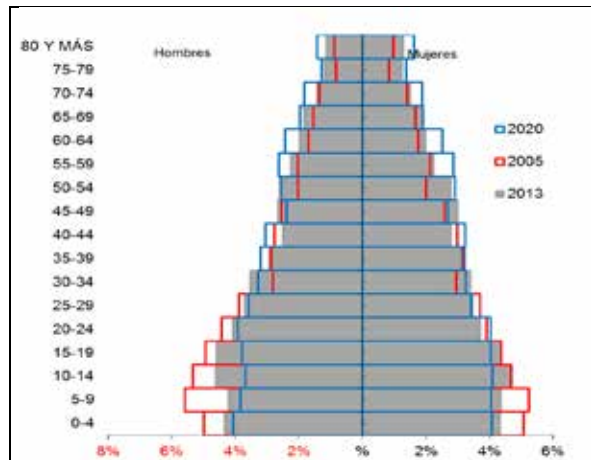
**Figure 5.3.3 Distribution of population in Imués**  
Source Population Forecasts (DANE, 2016)

“The population of aged between 0 and 26 in 2007 made up 49% of the Municipality’s total population and it currently makes up 46 %, which is due to the reduction in the birth rate and the leaving of adult population generally out of a need to work” (Imués, Alcaldía Municipal, 2012).

When analyzing the population pyramid which provides information on the population of a place at a given point in time, the dynamics and evolution of a population can be interpreted and, in some cases, certain factors that modify its make by age and gender.

Following, is the population pyramid of the municipality of Imués, in **Figure 5.3.6**, where there can be observed the population growth trend in the municipality, the base of the pyramid corresponding to first infancy shows a slight growth in population groups aged between 5 and 19. From 20 to 44 years, there is observe a population drop both of men and women, from 45 to 54 there is a slight widening of the population and, starting at 55 years and older there is observed a clear drop, which can be associated to causes such as migrations and the mortality rate.

Consequently, it can be deduced that because of the migration of the population resulting from a lack of job to other territories generate shifts in the municipality’s demographic trends, because in addition to the population drop that is caused by people leaving the urban or rural areas there is also the impact on the way of life of the people, acquiring other traditions, customs or even significant cultural changes (Plan de Desarrollo Municipal de Imués, 2012)



**Figure 5.3.4. Population pyramid of municipality of Imués**  
Source: Population forecasts (DANE, 2010)

With respect to the economically-active population (PEA), according to DANE forecasts for 2016 the municipality of Imués has 3559 persons in said condition, which is equivalent to 58% of the total population. The age range considered stands at between 18 and 65, following the national norms with regards to child labor.

### Population in situation of displacement

The Department of Nariño, has been immersed in the phenomenon of displacement given the general violence and the illegal crop eradication program; thus, since it has become a reception center for displaced people from departments such as Putumayo, Cauca, Antioquia, and Meta. A total of 240 persons are recognized in this situation.

The population in a situation of endogenous displacement results from the impairment of income generated from illegal crops and the pressure exerted by criminals in areas where they lived, turning into factors beyond their control, to the extent that said migration is the result of social-economic factors and violence (Plan de Desarrollo Municipal de Imués, 2012).

This situation has caused municipal administrators to endeavor efforts to provide humanitarian assistance to people and households affected by forced displacement to cover immediate essential needs and also in the process for the social-economic restoration through comprehensive actions intended to generate income.

### ü Essential Needs Index (NBI)

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According to **Table 5.3.11** there can be observed that the Unsatisfied Essential Needs Index in the municipality exceeds 50%, specially among the rural population with a percentage of 57,50%, which indicates that the municipality is not providing the population with the essential needs.

**Table 5.3.3. Unsatisfied Essential Needs Index Imués**

UNSATISFIED ESSENTIAL NEEDS INDEX		
Urban Population	Rural Population	Average
35,52%	57,50%	55,43%

Source (Plan de Desarrollo Municipal de Imués, 2012)

The municipality of Imués is eminently rural because 90,6% of the population is settled in that area, which determines its lifestyle, which tends to be slower in pace than that in the urban sector. In rural areas, education opportunities are limited, as is access to transportation, business, and social interaction. It is identified that the NBI index is higher to the index in the urban zone.

o Municipality of Yacuanquer

ü Settlement dynamics

The municipality of Yacuanquer was founded by Lorenzo de Aldana by mid October 1539 in the valley of Huacanquer, today known as a town of history, peace, and kind, **hard-working, and progressive people**; this municipality was the founding seat of Villa Viciosa de la Concepción de Pasto. The origin of the name comes from the original inhabitants of these lands, the Huacanqueres Indians of the Quillasinga family. In Quechua, Yacuanquer means, “town of sepulchers or of the Idols” (Plan de Desarrollo de Yacuanquer, 2012).

Among the most representative events for the municipality of Yacuanquer there is the creation of the Galeras Flora and Fauna Sanctuary, stipulated in Resolution Number 052 of 1985, by means of Agreement number 013 dated January 20, 1985. The intention of this Sanctuary is to preserve animal and plant species; the approximate area is 7615 hectares, where there is a buffer area that has an influence on the municipalities of Pasto, La Florida, Sandoná, Consacá, Yacuanquer, and Tangua (Plan de Desarrollo de Yacuanquer, 2012).



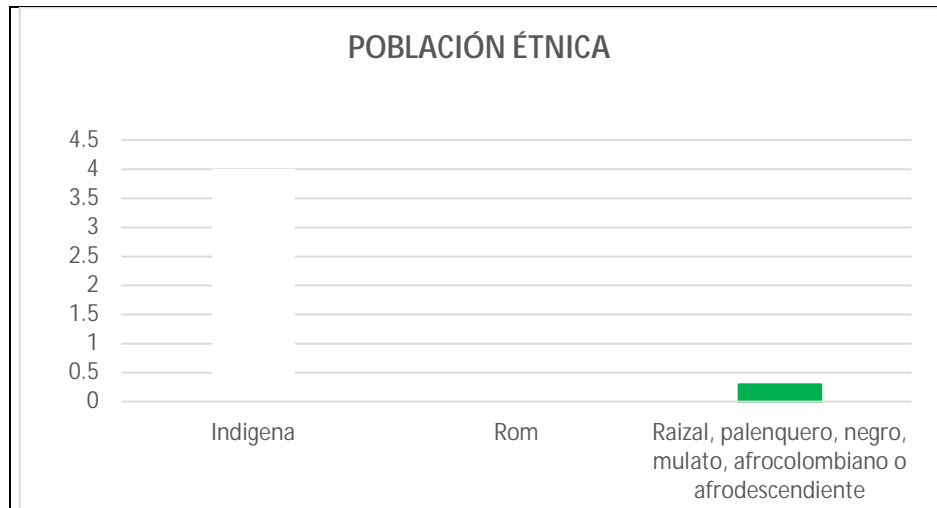
Additionally, the municipality of Yacuanquer is of great historic relevance, because availing itself of the geographical and topographical features, it lent itself as the setting for several of the battles of independence (Yacuanquer, Alcaldia Municipal, 2012).

The founding of the municipality of Yacuanquer “makes this settlement one of the first in the region that tries to adjust the preconceived development scheme of the Indian laws imposed by the Spanish conquest” (Yacuanquer, Alcaldia Municipal, 2012). This had an effect on the municipality’s population dynamics, because of the possible cultural exchange that was propitiated, resulting in various population settlements found in the municipality.

According to the DANA Census of 2005, 33,5% of the population in Yacuanquer who changed dwelling in the last five years, did so out of the difficulty to find a job, 35,1% did so because of family reasons, 16% because of threats to their lives, 7,4% out of a need for education, 3,7% due to health reasons, 3,2% out of natural disaster risks, and 1,1% for other reasons. On the other hand 98,5% of the population 5 and older currently living was born in the municipality and only 1,4% of the population in the same age range hails from another municipality, which clearly shows that the foreign population is not significant and therefore does not affect its dynamics.

With regards to the settled population, it can be identified that they are farmers and there is also the presence of persons recognized as afro descendants and who, according to SISBEN reports belong to (social strata) levels 1 and 2. Also considered is that Yacuanquer is connected to other regions, which generates flows of persons in a temporary or permanent manner, thereby affecting the population and settling dynamics both in the rural and urban areas.

In the municipality, 0,3% of the resident population is recognized as afro descendant, no indigenous population is recognized, neither is any Room, as shown below (DANE, 2012) See Figure.5.3.7.



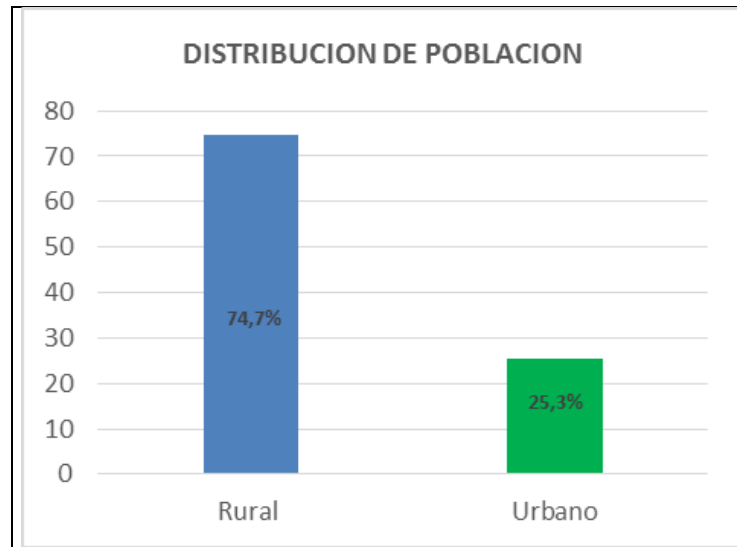
**Figure.5.3.5 Ethnic population Municipality of Yacuanquer**  
Source (DANE, 2012)

Taking the municipality’s structure, the economy is predominantly agrarian, although the plots of land do not generate sufficient yield. Because of the diversity in climate there is production of potato, peas, corn, beans, coffee, some fruits such as lemon, orange, cherimoya, guava. Some properties are also used in cattle raising operations. There is also identified the existence of 12 mines from which 60 families depend (Yacuanquer, Alcaldia Municipal, 2012).

In the urban sector trade can be identified as the main activity through the opening of various establishments for the purchase and sale of products, goods, and services, such as restaurants, stores, stationaries, pots and pans, internet, among others. 7% of the municipality’s economy is industrial as reflected in the transformation of milk, a coffee company, and wood transformation (Yacuanquer, Alcaldia Municipal, 2012).

ü Demographic trends

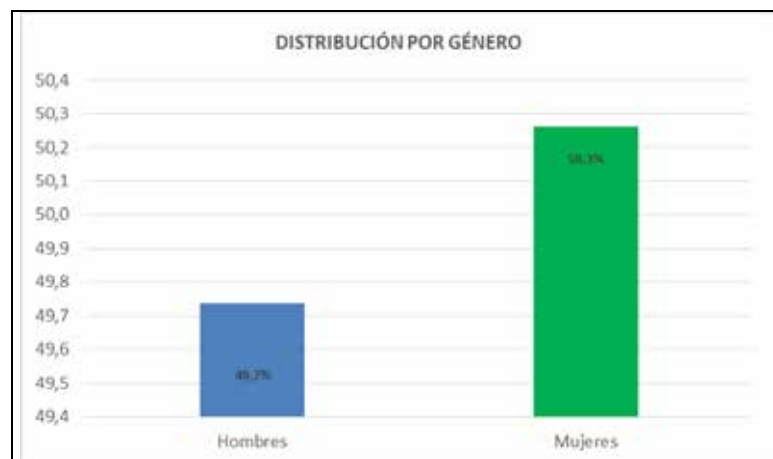
According to DANE forecasts for 2016, the Municipality of Yacuanquer has approximately “a total population of 11.064; the population belonging to the rural sector is 7.976 inhabitants and the urban population is 2.702, equivalent to 74.7% and 25.3% respectively.” See **Figure.5.3.8** (Yacuanquer, Alcaldia Municipal, 2012)



**Figure.5.3.6 Distribution of population municipality of Yacuanquer**

Source: Municipal development plan (Yacuanquer, Alcaldia Municipal, 2012)

Regarding the distribution of population by gender it can be identified that there are 5.503 men, corresponding to 49,7% and 5.561 women, corresponding to 50,3%. As shown in **Figure.5.3.9**



**Figure.5.3.7 Distribution by gender Municipality of Yacuanquer**

Source: Population forecasts (DANE, 2016)

The population pyramid shows the municipality's demographic dynamics. In the first place, there are the adult ranging in ages between 19 to 64 and a curve which population accounts for 55%, followed by the population under 12 with 20.4% with

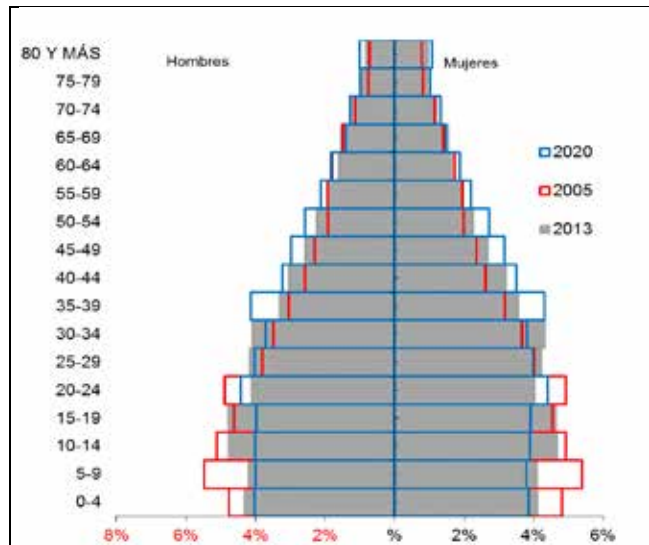
respect to the total; teenagers for their part make up 18.8%; finally, senior citizens and children younger than one, whose population corresponds to 12.6% and 1.8% respectively. The Municipality is characterized for having a very representative and numerous young population with respect to the adult and aging population (Alcaldia Municipal de Yacuanquer, 2014).

The working age population according to DANE is that in the 12 to 64 age range, who are capable through their work of generating some economic activity. This population in the municipality of Yacuanquer is equivalent to 74% of the total of 7.967 persons (Alcaldia Municipal de Yacuanquer, 2014).

“The school population which ranges in ages from 5 to 17, enrolled in the education system in the primary, secondary, and medium levels, is 23.5% corresponding to 2.538 boys, girls, and teenagers. The population belonging to the first infancy (0 to 4) is very small, 911 minors that are the equivalent of 8.4% of the total population” (Yacuanquer, Alcaldia Municipal, 2012).

“Economically dependent population, those who because of age that is older than 65 or younger than 18 and are part of the education system, is 3.843 persons, approximately represented by 37% of the total population of the Municipality” (Alcaldia Municipal de Yacuanquer, 2014).

Following is the population pyramid of the municipality of Yacuanquer where it is possible to identify that it is of an extensive type. A drop in fertility and birth rates is observed; the largest population groups correspond to the ages of 10 and 34, as the pyramid progresses, there is observed a narrowing in the older population and a drop in mortality (DANE, 2011). See **Figure.5.3.10**



**Figure.5.3.8. Population pyramid municipality of Yacuanquer**  
Source: Population forecasts (DANE, 2011)

### Population in situation of displacement

According to the UN, the three department with the highest concentration of mass displacement events (over 50 people) during 2013 are Nariño, Antioquia, and Chocó (Pacific Coast). Only between January and November 2013, the ACNUR recorded a total of ninety events of mass displacement, affecting close to 6.881 families.

Regarding the population in situation of displacement in the municipality of Yacuanquer and similar to Imués and other municipalities in Nariño, it is also considered as a receiving center of population because of the internal conflict existing in the country. It has been possible to identify 186 persons corresponding to 40 families, among boys, girls, teenagers, and adults, but there is no information from where this population group hails (Yacuanquer, Alcaldia Municipal, 2012).

In the case of receiving municipalities the main problem is unemployment and impossibility of generating stable economic income for these families. The informal economy and the "scrounging" becomes the main source of income, given that most of those displaced can only jockey for unskilled jobs and who do so to the impairment of labor opportunities for locals.

The arrival of the project, the existence of labor and low job offers in the municipality could generate pressures for the project, of people looking to access the jobs demanded by the construction phase.

Ü Essential Needs Index (NBI)

Regarding the situation of poverty being experienced by the population of the municipality of, it is found that the 2005 census by the DANE the “NBI index for the municipal capital indicates that 39,87% exhibit unsatisfied essential needs, while in the rural area this indicator jumps to 70,91%, in total the percentage of people with low standard of life is 63,39% with respect to the total of the municipality; The figures above are found to be above the department and national averages, which indicates the social deterioration of the population in the municipality with respect to the population of Nariño and Colombia, the department exhibits an NBI of 25,92%, in urban areas, 59,39% in the rural area, and a total of 43,79% of people in this condition, and the difficulty to access basic services” (Alcaldia Municipal de Yacuanquer, 2014).

According to the above, the population of the municipality exhibits a low standard of life, which is evidenced in the weaknesses in physical infrastructure which is essential for the human development of inhabitants (Alcaldia Municipal de Yacuanquer, 2014).

The Municipality of Yacuanquer has a representative population living in a situation of poverty and vulnerability, therefore several social management programs have been put in place nationally by the Department for Social Prosperity; programs intended to overcome poverty and attention to the vulnerable population, including the infant population, teenagers, expecting mothers, lactating babies, and senior citizens; also programs to tend to persons in a situation of disability and forced displacement (Alcaldia Municipal de Yacuanquer, 2014) See **Table.5.3.12**

**Table.5.3.4 Unsatisfied Essential Needs Index Yacuanquer**

UNSATISFIED ESSENTIAL NEEDS INDEX		
Urban Population	Rural Population	Average
39,87	70,91	63,39

Source: DANE Census – Forecasts (Alcaldia Municipal de Yacuanquer, 2014)

The distribution of population in the municipality of Yacuanquer is concentrated in the rural area and there is no significant difference between men and women. The economically active population ranges in ages between 17 and 62 and the largest segment of the population is found in the 10 to 34 age group, that is, it is young and as

such it has aspirations of improving their standard of life through dignified employment. There is a significant reduction in the municipality’s infant population.

According to the Unsatisfied Basic Needs Index, which is higher in the rural area, indicates that the municipality has still not satisfied essential needs such as water supply, aqueduct, and sewage. That is, Yacuanquer is found among the municipalities with the greatest economic and social needs, which in turn implies a challenge for public entities to reduce the NBI index.

- o Municipality of Tangua

- ü Settlement dynamics

The settlement dynamics relates to the most important historical events that have had an effect on the regional population dynamics, identifying the type of population settled and the economic activities that stand out. A presentation will also be made about the distribution between the rural and urban areas.

The name of the municipality originates from the name of a primitive tribe, whose chieftain was called “Tangua.” The municipal capital is distributed among two foundations, one that is indigenous, organized during colonial times without belonging to any order and the official foundation that occurred in 1840, with the founders being Messrs Juan Dorado, Laureano José María, and Álvaro Guerrero, as well as, Lorenzo Puchana, having as their priority as part of their ideals that the municipality should have streets like other towns of Colombia. Since the foundation in 1864, the human settlement was a township attached to Yacuanquer, on which year and by means of Ordinance 103 issued by the Assembly of Cauca it is established as a new municipality (Alcaldia Municipal de Tangua, 2016).

One of the most relevant historical events that generate an influence on the municipality’s population dynamics refers to construction of roads to connect the municipality with the capital of the Department of Nariño and with border cities between Colombia and Ecuador (Ipiales and Tulcán respectively); “this particular characteristic of the road infrastructure and the geographical location of the municipality of Tangua has allowed it to have access to services offered from those cities” (Alcaldia Municipal de Tangua, 2016).

The type of settlement in the municipality of Tangua is characterized mainly by being of peasant origin place in levels 1 and 2 of SISBEN, which evidences the state of vulnerability of its inhabitants. It is also recognized that Tangua because of its strategic

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location, was able to connect with other regions, which generates flows of people who transit temporarily or who established themselves on a permanent basis, influencing the manners of settlement in the urban and rural areas.

According to the characterization, in Colombia there are distinguished three groups of communities: On the one hand, there is the indigenous population, afro descendants, raizales (creole), palenqueros, mulatos, or black and the Room or Gypsy community; Based in the above, the ethnic population residing in the municipality of Tangua, 31 persons, corresponding to 0.3% are recognized indigenous population and 6 persons representing 0,1% recognize themselves as afro-descendants (Tangua, Alcaldía municipal, 2016 ).

While only 31 persons recognize themselves as indigenous population, it must be considered that in the Municipality of Tangua there is an Indigenous Council, recently formed and registered with the Tangua City Hall by means of Possession Minutes 001, dated January 21, 2016; this community being certified by Resolution No. 22, dated August 01, 2016 is in the midst of a reorganization of their territory and culture. The initial meeting for the previous consultation was attended by 70 persons which bespeaks of the important number of the indigenous population present in the project's area of influence.

The information regarding the exact number of members of this council will be obtained during the phases of the previous consultation, which so far begins, specifically during the diagnosis and characterization phase.

The main economic activities in the municipality of Tangua are agriculture, cattle raising, and the extraction of sand, which are carried out in a traditional manner with little technology; growers lack modern and adequate knowledge nor do they have the production factors: land, work, capital, to allow them to conduct this activity in improved conditions. As a consequence only subsistence income is derived, farmers only have the resources to satisfy the needs of their families and the production, the main agricultural products in the municipality being wheat, corn, pea, beans, and potato.

The municipality of Tangua, agriculture and cattle raising is conducted in small plots, but these activities fail to satisfy the needs of its inhabitants, which forces them to engage themselves in other activities outside of their plot. In the livestock sector, the predominant activity is cattle raising geared to the production of milk, mainly with Holstein and its various cross breeds. The exploitation of smaller species is dedicated to the raising of pigs, poultry for both egg and meat, guinea pigs, and rabbits. Inasmuch as commercial and services activities is concerned, there are in the municipal capital

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shops, stores, restaurants, and electrical-mechanical shops, in charge of catering to the local demand among other (Alcaldía Municipal de Tangua, 2016).

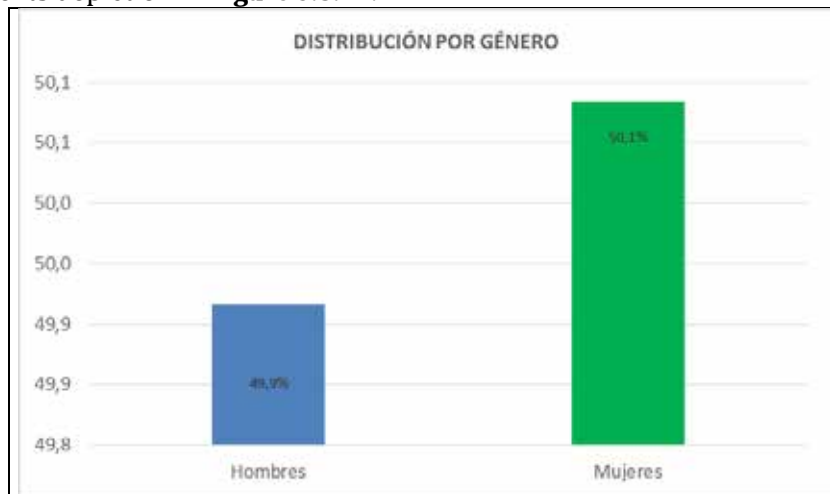
The production of milk and meat producing bovines, egg laying and meat production poultry is achieved 100% through traditional means. The production of pigs is 90% under the traditional system and 10% technified; the production of guinea pigs is 95% under the traditional system and 5% technified.

The number of jobs generated in the municipality are insufficient to absorb all the labor available in the municipality and salaries are excessively low, this becoming evident by the proliferation of jobs qualified as unskilled (Tangua, Alcaldía municipal, 2016).

#### Ü Demographic trends

By 2016, the municipality of Tangua has an approximate total population of 9.506 persons according to DANE projections DANE in the 2005 census (Alcaldía Municipal de Tangua, 2016); and with respect to the density of the population in the municipality, this is 74 inhabitants per Km (Alcaldía Municipal de Tangua, 2012).

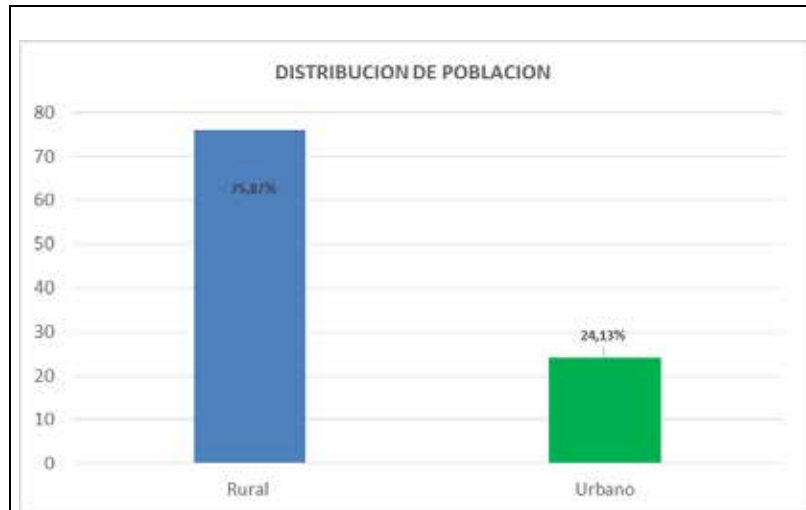
With respect to the population by gender it can be identified that for 2016, the projection of men is 4.745 corresponding to 50,4% and 4.761 women, corresponding to 49,6%. See its depiction in **Figure 5.3.11**.



**Figure 5.3.9 Distribution by gender municipality of Tangua**

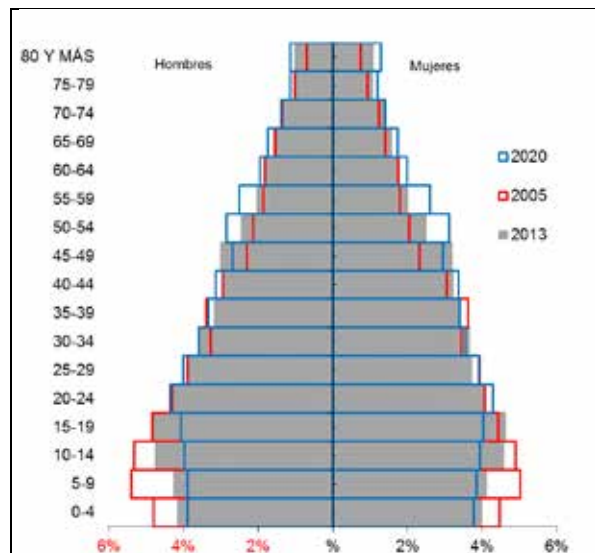
Source: Population forecasts (DANE, 2016)

The population of the municipality of Tangua is settled in the rural zone with 75,87% and in the urban zone 24,13%



**Figure 5.3.10 Distribution of the population municipality of Tangua**  
Source: (Plan de Desarrollo Municipal de Tangua, 2016)

The population pyramid for the municipality of Tangua is of the expansive type; a reduction of the base is identified in the group aged 0 to 4, and an increase starts in the group aged 30 to 50. See **Figure 5.3.13**



**Figure 5.3.11 Population pyramid municipality of Tangua**

Source: Population forecasts (DANE, 2016)

### Population in situation of displacement

Regarding the matter of displacement, the municipality of Tangua is considered as an ejector and receiver. The victimizing event occurred in 2002 in the las Palmas sector, where families had to abandon their homes and move mainly to the municipality of Pasto. However, these families did not inform the competent authorities and therefore are not registered with the Displaced Population Information system SIPOD (Alcaldia Municipal de Tangua, 2016).

The return of the victimized population took place gradually and voluntarily, they received the support from various institutions who have intervened in the process to rebuild their life project through economic development and income generating projects (Alcaldia Municipal de Tangua, 2016).

Persons in condition of forced displacement appeal for the first time to this instance to report their situation to the “Municipal Ombudsman’s Office, this entity gives account of a rate of inclusion of 63.19%, out of a data base of 111 persons and 42 households displaced by violence” (Alcaldia Municipal de Tangua, 2012). However, according to the information provided by the Sole Integral Displaced Population Plan PIU, there is a total of 27 households in condition of displacement which yields a result of a total of 100 persons.

As is the case with the municipalities of Imués and Yacuanquer, with the arrival of the project the existence of labor and low job offers in the municipality could generate pressure on the project as they seek to access the jobs demanded by the construction phase. That is why information and communication actions, the coordination with the municipal authorities, the existence of a hiring program, will be fundamental during the execution of the works.

### Ü Unsatisfied Essential Needs Index (NBI)

The level of satisfaction with social services is of vital importance to the standard of life of the population, because it determines its adaptability to the region and therefore its permanence in it. However, if there are failings in gaining access to these services or priority factors (such as for example job generation sources), this compels the population to possibly consider appropriate migrating to other regions for the purpose of improving their standard of living, and that may lead to changes in the demographic

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trends, because according to the population settled in the municipality, authorities visualize the needs and generate action plans in order to provide an adequate response.

**Table 5.3.5 Unsatisfied Essential Needs Index Municipality of Tangua**

UNSATISFIED ESSENTIAL NEEDS INDEX		
Urban Population	Rural Population	Average
31,49	60,01	54,38

Source: (DANE, 2011)

Based on the data provided by the DANE, “the percentage of unsatisfied essential needs throughout the municipality of Tangua is 54,38%; in the municipal capital is 31,49% and in the rest of the municipality 60,1%” (Alcaldía Municipal de Tangua, 2016).

The demographic data of the municipality of Tangua reveal that there is no significant difference between the distribution by gender; the largest population group is found in the 10 to 34 age group and there is a constant migration to nearby areas given its closeness to the Department’s capital. The largest population group is found settled in the rural zone.

In rural areas, education opportunities are limited, as are the facilities for transportation, business, and social interaction. It is identified that the NBI is higher than the index of the population in the urban area.

- *Functional Unit 5.1*
  - o Municipality of Pasto
    - ü Settlement dynamics

The dynamics of population is related to the most important events that have had an effect on the regional settlement dynamics, identifying the type of population settled and the economic activities that stand out. A presentation will also be made on the distribution between the rural and urban areas.

The Municipality of Pasto was “founded on January 13, 1537, by Sebastián de Belalcázar. Pasto throws its common ancestry with that of the immense territory that was once called Hatunllacta, land of elders, large land in the Quechuan language” (Alcaldía de Pasto, Secretaría de Salud, 2012).

According to the historical data “in the middle of the 1990s, some of the old indigenous councils that existed in Pasto began a process to reconstitute their reservations and indigenous councils. There are four townships in the Municipality of Pasto where there are currently indigenous councils organized and with a large proportion of its inhabitants recognizing themselves as indigenous from the Quillasinga nation. This process of ethnic vindication by the inhabitants of El Encano, and later by those in La Laguna and Cabrera, with the same happening in Genoy in 2008 and similar processes are taking place in Obonuco, Mocondino, and lately in the sector of Aranda” (Alcaldía Municipal de Pasto, 2014).

Additionally, the indigenous community of the Quillasingas, during the XVI the territory of the Department of Nariño was also occupied by the indigenous nation of the Pastos, settled in the south high plains and the Abades who were settled in the inter-Andean slopes of the Pascual river (Viloria J, 2007).

At the time of the arrival of the Spaniards, in their territory indigenous people planted mostly corn, beans, fruit trees, and fique (hemp). Also, another of the riches of these communities was extracted from the valleys of the Patía, Juanambú, and Mayo rivers, where small gold exploitations were located, and where cotton, coca, and indigo were planted (Viloria J, 2007).

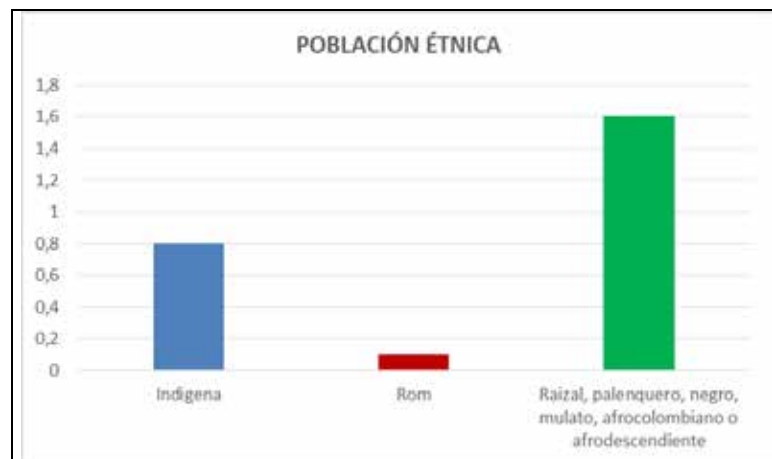
Workers in the colder climate lands were transported to low lands with characteristics of dry bush to work as salt collectors; this phenomenon resulted because in these sub regions low population density was associated to geographical isolation, the lack of roads, endemic diseases and the shortage of good farming land (West Robert, 2000) quoted by (Viloria J, 2007).

During the first decades of the XX century the Department of Nariño was isolated from the rest of the country and the roads to reach various destinations posed a series of difficulties, as high lands, valleys, jungles, rivers, and other had to be traversed. “Then, in 1970 the Pan American road was built, it being the main access road that connects Nariño with the rest of Colombia and with the Republic of Ecuador. In addition to the above, the airports of Pasto, Ipiales, and Tumaco have contributed to the integration of the Department with the cities in the rest of the country” (Viloria J, 2007).

With respect to the population settled in the municipality of Pasto it can be identified that according to the distribution of the city, there is recognized population of farmers, indigenous people, and urban dwellers settled in the city’s neighborhoods. According to the SISBEN reports they belong to levels 1 and 2, in the various social-economic strata. Also, it must be considered that because of Pasto being the capital of the department, there is great affluence of people from other regions of other municipalities in the

department and the rest of the country who arrive temporarily or permanently, affecting the settlement dynamics both in the rural and urban areas.

According to the characterization in Colombia, there are distinguished three groups of communities. On the one hand, there is the indigenous populations, afro descendants, raizales (creole), palenqueros, mulatos, or black and the Room or Gypsy community. Based on the above the ethnic population in the municipality of Pasto is found related with the population’s migration processes, “according to the 2005 census, identified as belonging to the indigenous communities were 2.871 persons, equivalent to 0,8% of the total population, ROM or Gypsy 5 persons, Raizales 6 persons and as Blacks, Mulatos or Afro Descendants 6.131 persons, that is 1,6% of the total population.” However, it must be taken into account that these data rise from the self acknowledgement that those surveyed make as belonging to any ethnic group, which is why these figures could vary significantly, as is the case that currently there are registered a total of 4.909 beneficiaries with the Municipal Health Secretary’s Office belonging to indigenous communities (DANE, 2012).



**Figure 5.3.12 Ethnic population Municipality of Pasto**

Source: Population forecasts (DANE, 2011)

According to the Territorial Ordering Plan 2014 - 2027, the above indigenous communities are determined according to the following memorandum: MEM14-000030039-DAI-2200, dated September 8, 2014, where the Ministry of the Interior certifies that; *Having reviewed the data bases of the Director’s Office of Indigenous Affairs Deputy Director’s Office of Records, the following communities were found that enjoy the recognition in the Municipality of Pasto thus:*

El Encano - Refugio del Sol, Quillasinga reservation: It has a territorial reservation recognized by means of agreement 20020 dated December 14, 2009. The land

recognized to the reservation add up to an area of 551 hectares; made up of isolated and dispersed lands.

**La Laguna – Quillasinga Community:** It is recognized by the Director’s Office of Indigenous Matters of the Ministry of the Interior by means of resolution No. 0139 dated December 4, 2007; it has not constituted itself into a reservation.

**Genoy – Quillasinga Community:** the council is recognized by the Director’s Office on Indigenous Matters of the Ministry of the Interior by means of resolution No. 0085 dated October 20, 2009; it has not constituted itself into a reservation.

**Obonuco - Comunidad Quillasinga:** It is recognized by the Director’s Office on Indigenous Matters of the Ministry of the Interior by means of resolution No. 0073 dated June 4, 2014; it has not constituted itself into a reservation.

It is pertinent to mention that there is the possibility of having the presence of other communities in the Municipality of Pasto that are in the process of being recognized and certified with the Ministry of the Interior (Alcaldía Municipal de Pasto, 2014).

In Pasto, the subcontracting of the economy is evident as 48% concentrates in this sector. It can be identified that 96% of the business fabric is made up of micro business establishments, engaged in activities with low possibilities of accumulation and informality is a reality in its structure. For the primary sector the most representative activity is farming and cattle raising. In the secondary sector, the most representative activity is the manufacturing industry, followed by construction. In the tertiary sector, it is represented by commerce and automobile repair services (Ministerio de trabajo, 2011).

“The economy of the Municipality of Pasto is divided into three large economic sectors: primary, secondary, and tertiary. The most representative sector is the tertiary with an average annual share to the added value of 76%. In the years of 2008 and 2010 there is evidence of an increase in the share of the secondary sector due to the behavior in the activities of construction and real estate and home renting services” (Alcaldía de Pasto, 2015).

The primary sector is made up of the subsectors: agricultural, cattle raising, forestry, and mining which as a whole account for the economic dynamics of the sector. “In the primary sector the agricultural activity had an average share for the period of 2005 – 2010 of 51%, followed by cattle raising with 32%. Fish farming has had an annual average of 13%. The less representative activities are fishing and exploitation of mines and stone quarries with a share of 2% respectively” (Alcaldía de Pasto, 2015).

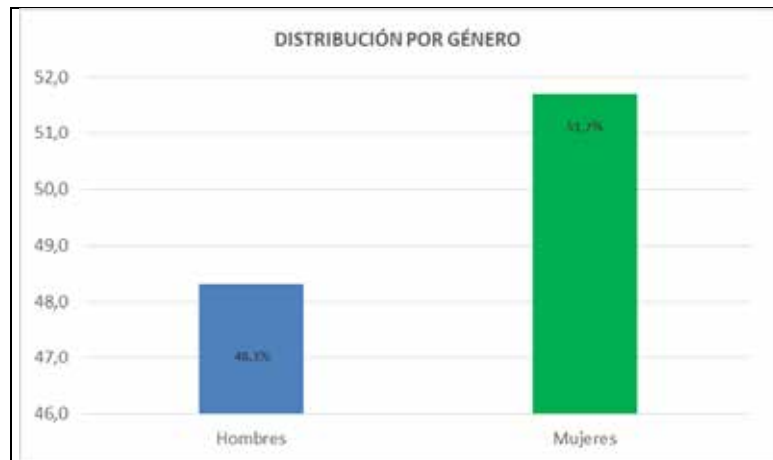
In the municipality of Pasto, as in most of the municipalities in the area of influence of the project, the main economic source is agriculture and cattle raising.

According to the 2011 census the female population predominates in the villages, and is generally engaged in informal and day laborer work; this population subsists with less than one minimum salary, but has good access to services due to the closeness of the city of Pasto.

Regarding the primary sector of the economy of the townships, agriculture is fundamental, cultivating vegetables in their small plots to supply the markets of the city of Pasto and for their own consumption, which strengthens their food safety. Currently the land is dedicated to agricultural (Territorial Ordering Plan, Municipality of Pasto 2012 -2015).

ü Demographic trends

According to the indicators of size and growth of the population in the municipality of Pasto there is identified that by 2.016, a total of 445.409 inhabitants, of which 215.188 corresponding to 48,3% are men and 230.221 are women, corresponding to 51,7%. This shows that there is no significant difference between men and women, in addition to this, there is also recognized an annual growth rate of 1,37%, while by 2020 growth is projected to reach 22,64% representing a population of 511.000 inhabitants (DANE, 2016).



**Figure 5.3.13 Distribution by gender in Pasto**

Source: Population forecasts (DANE, 2016)

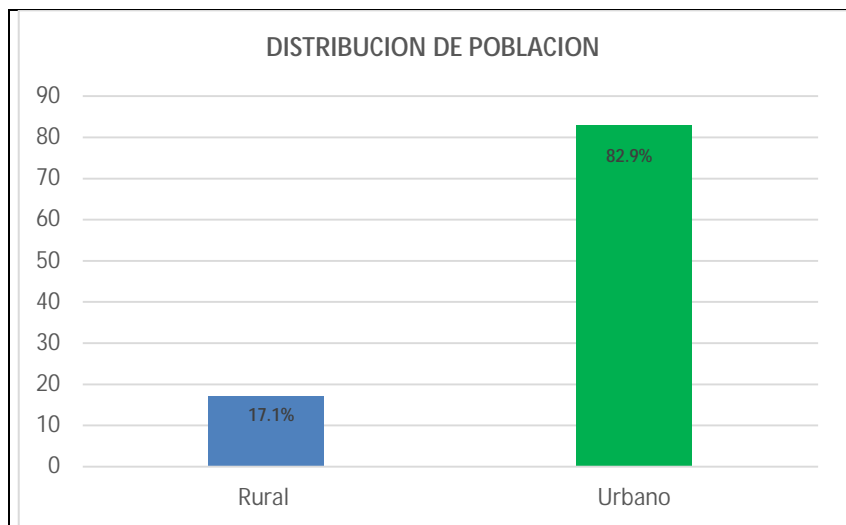


With respect to the spatial distribution in the municipality of Pasto, it is distinguished that 82,9% of the population is settled in the municipal capital and 17,1% in the rural zone. See **Figure 5.3.16 Distribution of the population of Pasto**.

The most densely populated districts are districts 3, 4, 5, and 6 which jointly house 48.4% of the urban population. At the countryside, the townships with the highest population density are Jongovito, Jamondino, Mocondino, San Fernando, Buesaquillo, and La Laguna (closest to the municipal capital) and which jointly house 29.5% of the rural population; because of these characteristics they become relevant in the face of the demand for residential utilities services and road connectivity (Alcaldía Municipal de Pasto, 2014).

The Territorial Ordering Plan 2014 - 2027, makes a reference to the existence of significant and notable exchanges of population, specially in the northwest and southwest sectors of the city, in addition to evidence of exchanges among all the districts and downtown of the Municipality of Pasto. This situation is determined by the presence of equipment and services in neighborhoods around districts 1 and 9 of the city.

With respect to the mobility between the urban and rural sector it is observed that the greatest flow of people is takes place on Mondays and Saturdays, because people use the opportunity to run personal errands with entities rendering services.

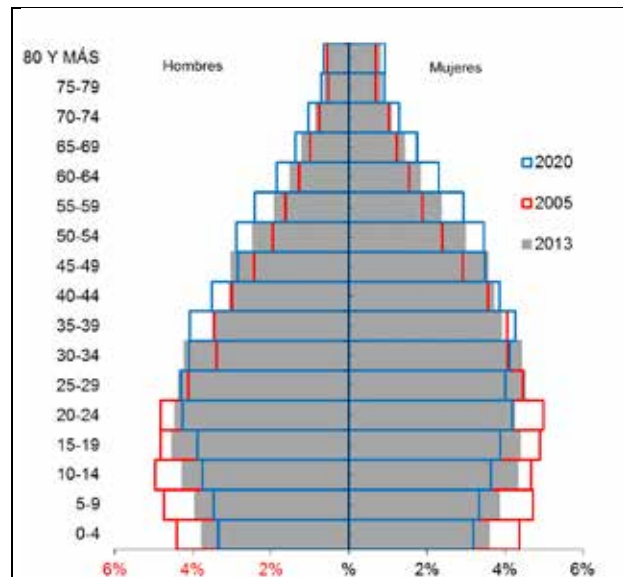


**Figure 5.3.14 Distribution of the population of Pasto**

Source (Alcaldía Municipal de Pasto, 2014)

In the population pyramid there is observed the gradual reduction of the global fertility rate by 2% between 2010 and 2011 which translates into a reduction in the number of births, while the migratory factor represents 34% of the current population and is highly relevant in the growth of the population in comparison to its natural or vegetative growth” (Alcaldia Municipal de Pasto, 2014).

According to the Territorial Plan for Health 2012 - 2015 “children under 1 year number 6.337, corresponding to 1.5%. Children below 5 represent 7.5% of the population. Minors under 15 years in the municipality number 102.894 and correspond to 24.3% of the population. The age group of between 15 and 49 is the population referred to as economically active, those over 60 are 44.383 inhabitants and represent 10.5%” (Alcaldia de Pasto, 2012).



**Figure 5.3.15 Population pyramid of Pasto**

Source: Population forecasts (DANE, 2016)

### Population in situation of displacement

Pasto is considered as the principal municipality of Nariño in the reception of population in situation of displacement. It has been possible to identify that 33% are younger than 14, 61,57% fall between 15 and 65 years of age and 3,97% are senior citizens. Regarding the identification by gender the ration is 82 to 100 with women taking the biggest share. 30,75% identify themselves as belonging to a group other than

indigenous or afro-descendant, 10% recognize themselves as indigenous and 7,29% as afro-descendant (Oviedo, 2012).

On the other hand, it is pertinent to make reference to the population in a situation of forced displacement as gaining an insight on it can help understand the demographic trends of the population, therefore, according to the Unit for Integral Attention for Victims, during 2009 there were recorded in Colombia 3.303.979 persons in situation of forced displacement, equivalent to 7% of the population.

By 2009 there were in the municipality of Pasto approximately 30.662 persons who stated to be in a situation of forced displacement, these figures have increased with time because the conflict in the country remains critical; consequently, by 2011 there were identified 37.811 persons in this situation, generating personal, family, social, economic, political, and cultural repercussions, which requires an action plan and a public policy that guarantees attention to that population (Alcaldia de Pasto, Secretaria de Salud, 2012).

Most of those internally displaced are from the rural area to urban centers, although the number of intra-urban displaced people is also rising, as 51% of internally displaced people live in the main 25 cities of Colombia (Acnur.org, 2016).

In the case of receiving municipalities, the main problem is **unemployment** and the impossibility of generating stable economic income for these families. The informal economy, construction, and the "scrounging" become their main source of income, because in the urban sector most displaced people can only jockey for unskilled jobs. The condition of vulnerability vis-à-vis fundamental rights of the displaced population is more serious for children and women who face, not only the consequences of the armed conflict, but also intra-family violence, maltreatment, and abuses, labor exploitation, sexual violence, discrimination, and uprooting (Gobernacion de Nariño, 2007).

#### Ü Unsatisfied Essential Needs Index (NBI)

In the municipality of Pasto there are identified “approximately 67.000 persons living in a situation of poverty; they fall below the minimum conditions to survive with dignity, because then cannot manage to satisfy their primary essential needs” (Alcaldía Municipal de Pasto., 2008).

According to the data supplied by the 2005 Census of DANE, it is forecasted that, out of a total of 96.364 households, in 34% the economic provider is lead by women, who

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receive income of less than a minimum legal salary in effect to cover the essential needs of the home, taking into account that “the average of persons that make up a household are equivalent to 4.4; therefore it is calculated that approximately 34.161 persons who are included in this type of household, live in conditions of poverty” (Alcaldía Municipal de Pasto., 2008).

Table 5.3.6 Basic Unsatisfied Needs Index - Municipality of Pasto

BASIC UNSATISFIED NEEDS INDEX		
Urban Population	Rural Population	Average
10,94	41,42	16,65

Source: (DANE, 2016)

Income received in each household for sustenance and basic needs such as food, clothing, housing, health, recreation, etc., is one of the most important among the indicators used to determine the quality of life of the population. We have been able to note that the income obtained in the households of the municipality of Pasto are not sufficient to satisfy their minimum expenses as families, which brings feelings of anguish, nonconformity, and conflicting relationships for home providers. (Alcaldía Municipal de Pasto, 2014).

Demographics show a slow growth of the population, a reduction in fertility, and a smaller pyramid after 25 years of age; the population is mainly settled in an urban zone. In terms of the ethnic population, it has settled in the townships of La Laguna, Genoy and Obonuco.

Pasto is known for being a municipality that receives displaced population from different municipalities in the Department, specially from the Pacific Coast and other Departments such as Putumayo and Cauca.

The Colombian government is addressing the displacement issue through the Land Restitution and Victims Act of 2011, in addition to the allocation of financial resources. Implementing the Victim's Act creates challenges when it comes to work with the international community in protecting new government institutions that are promoting

actions to guarantee proper and timely support and registration of victims and safety for their communities and leaders who claim to be returned to their land.

After submitting the demographics for municipalities in the area of influence, we may conclude that according to DANE, for 2020, 22.64% of the population in Pasto will continue their course, and information even leads to believing that they may even leverage, as this significant work will allow better connectivity in Pasto not only with other municipalities in Colombia in southern Nariño, but even in our neighbor country of Ecuador; given its dollar economy, they visit municipalities such as Ipiales and Pasto to find provisions at a more favorable exchange rate. This road's construction will strengthen Pasto as the capital of the Department, significantly influencing the demographic growth.

The situation for the municipalities of Yacuanquer, Imués and Tangua is different, as they currently have a stagnant growth of their population and in fact it is being reduced as in the strong case of Imues; the presence of the Rumichaca - Pasto road project evidences that it is likely for this dynamic to revert, since they will have a modern road that will allow not only economic flow, but also a circulation of people. The construction of this project may cause that the migration process that exists as of today stops, given the possibility of connecting with the capital and with nearby municipalities for social interaction and economic growth.

However, upon knowing that there are very few sources of employment, the construction process may bring foreign population that would affect the locals, if hired. Therefore, the project will set forth measures to prioritize not only hiring the population in the municipalities in the area of influence, specially those in the minor land units, but also by acquiring all the necessary input.

### 5.3.2.2 Minor land units

#### Functional Unit 4

#### Population Group Characterization

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According to the information gathered in the field through the village data sheet to determine the characterization of population groups, we have found that the population living in the minor land units in functional unit 4, are mostly farmers. It was interesting to see that the leaders that complete the data sheet did not refer to the indigenous population in this Functional Unit; and they are present in the municipalities in the area of influence. However, we must say that during the prior consultation process with certified communities, the first stage will be about the characterization of the indigenous population that forms the council and it will be exposed within the chapter on ethnic communities.

The farmers' population has been identified through a series of economic, social, and cultural characteristics including mainly: agricultural activities, intense family labor with capital limitations since the product is generally destined for self-consumption and in certain amounts, oriented towards the market.

One of the factors that has an impact on the development of the farmer's labor force is the poor level of training, which hinders implementing new production methods and developing local technology. Minors and women dedicate their lives to agricultural and domestic tasks to contribute to their family's sustenance.

The life condition of farmers is evident in their houses, built with homemade materials. In terms of recreation, their main means of distraction is television, in second place, alcohol consumption. In terms of sports, soccer and "chaza" are the most popular. Among others there is "sapo", cards, volleyball and billiards.

### Population Dynamics

The following is the information obtained around the population dynamics of minor land units in Functional Unit 4, through the application of the village data sheet at the field and the Municipal Development Plan consultation:

Pilcuán. This village belongs to the Municipality of Imués, the land where it is currently located had several owners; initially inhabited by Mr. Pedro Lucano, José María Tello and Mrs. Rosa Pascuaza, who became it's founders; following them came Mr. Maximiliano Guerrero, Mr. Cesar Coral and Mr. Vicente Dávila, who began to sell their lots in time until creating the village, which was built based on the need for its

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inhabitants to manage projects within the village before the Mayor's Office. This village is inhabited by farmers and there are no organized reserves or indigenous communities, nor are there any under any type of process of recognition, according to the leaders we interviewed.

A larger number of visitors from other municipalities arrive at the village on weekends and holidays, seeking its touristic, relaxed environment; according to the Municipal Development Plan for Imués in 2016: "The warm and dry weather condition of Pilcuán is considered as proper for improving the respiratory tract, and ideal for the relaxation of children, adults, and seniors". We have not identified anyone who has migrated from the village in the past few years.

Similar to other villages in the municipality of Imués, Pilcuán holds several properties for recreation and leisure; which is why it has more commercial activity, and has an inflow of visitors during weekends. We also identified that those who have properties in this sector, come to visit during weekends, or twice a month.

El Pedregal. This territory formerly belonged to the Belalcázar family's ranch, who became the founders of El Pedregal. The first to populate this area were the Tello, Zambrano, Arteaga and Nandar families. After them, people began to come in search of jobs, taking advantage of the geographic location and the movement of pedestrians and vehicles to trade food. This location is strategic, as it is a section that unites the roads that run from the city of Pasto to Pedregal, the intersection of the road towards Tumaco and the road that runs from Pedregal to Ipiales and back.

During the past 5 years, people have arrived to the village for labor purposes. Some people pass by transitorily at the end of the year, for touristic purposes.

Inantas Bajo. In 1890, the current Inantas Bajo village territory was part of the ranch owned by General José María Guerrero, who also owned the Capulí, Tapialquer and Zaragoza ranches. It was later inherited to his grandson, Mr. Olmedo Guerrero Troya. Since 1920, this territory was inhabited by rafters who came from nearby populations. Its population began to grow in 1978.

Certain people have arrived to the village in search of job opportunities, they usually develop agricultural or commercial activities, or for the acquisition of land. At least 15 people emigrated this year (2016) for labor or educational reasons.

Inantas Alto. This territory belonged to the ranches owned by General José María Guerrero, this land was inherited by his grandson, Mr. Olmedo Guerrero Troya. Since 1920, this territory was inhabited by rafters, who came from nearby locations. The population began to grow in 1978.

Further along, in 1989 the village's territory divided, given the construction of the school. During the past 5 years, a few people have arrived to purchase land.

Cochaverde. The name of the village was determined by the existence of a fish lagoon. The territory was divided after this, becoming the Cocha Verde village in 1984 when the Community Councils were consolidated.

During the last 5 years, some inhabitants have come to the village due to the good weather conditions and the quiet atmosphere that the area offers. In a transient way, people who usually come from other departments arrive for the New Year vacation season, Holy Week and patron saint festivities, to visit their relatives.

Tablón Obraje. The territory that currently occupies the Tablón Obraje village was part of a ranch that belonged to Mrs. Inés, who gradually gave land to her workers as payment for their services. She also traded animals for land and sold lots at low prices. The village of Tablón Obraje was founded in 1916.

In the last five years, a few permanent villagers have arrived to work in agricultural tasks. People also arrive transitorily, more frequently during the year-end season and holy week, to visit their relatives.

San Pedro Obraje. The only known historical data is its creation in 1966. In the course of the last 5 years, some families have come to the village for work and family reasons. People arrive from other villages, other municipalities and departments at the end of the year to visit relatives transitorily.



Corazón de Jesús, Fátima and Bolívar Neighborhoods. The Corazón de Jesus neighborhood was previously known as Cunango; when the Pan-American Highway was built, it was renamed to Panamericano neighborhood, and it has held its current name for 15 years. Mr. Franco Urbina built the Sagrado Corazón de Jesús grotto with support from the community.

More people arrive in the three neighborhoods of the urban center of Tangua during the weekends and at the end of the year. People come for long periods in search of work and they come from other departments.

El Vergel. This territory was a settlement of the Quillasinga indigenous community. Later on it became known as El Potrero. Towards the year 1986 it was founded as El Vergel village by Mr. Lorenzo Puchana, who was also the founder of the municipality of Tangua.

A few inhabitants have arrived at the village during the last 5 years, due to favorable climatic conditions. People arrive at the end of the year season, Holy Week, patron saint festivities, to visit their relatives and for tourism; they usually come from other departments such as Antioquia and Cundinamarca.

During this year (2016), 32 people from the village migrated to other municipalities in search of job opportunities.

Buena Esperanza. The village's data sheet mentions 1990 as year of creation. Previously, it was part of El Cebadal village, there were 3 farms and the farmers who came to work in them, began to purchase the lots progressively.

A greater number of people arrive at the village at the end of the year, patron saint festivities, Easter and during the holidays. Those who come temporarily to visit their relatives, come from other municipalities in Nariño and from other departments.

People who have come to the village in the last 5 years, have done so to get rid of the stress of the city. The village's data sheet has no report of families leaving the village.

#### Population trends and Population structure

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Table 5.3.15 and Figure 5.3.18, represent the distribution by age groups in the minor land units of FU 4; the group of adults aged 18-65 is the most representative, mainly in Pilcuán, El Pedregal, Inantas Bajo, Cochaverde, Tablón Obraje, and Fatima, Corazón de Jesús and Bolívar de Tangua neighborhoods. It is followed by the age group between 6 and 17 years, mainly in El Pedregal, the neighborhoods of Corazón de Jesús and Bolívar de Tangua. The Pilcuán minor land unit stands out for having the largest number of inhabitants in 2000 and the Inantas Alto minor land unit has the lowest number of inhabitants, 108.

Table 5.3.7 Distribution by age groups in the minor land units of FU4

Minor land unit	Children 0-5 years	School-age 6-17 years	Adults 18-65 years	Over 66 years old	Total
Pilcuán	90	218	1467	225	2000
El Pedregal	30	421	1359	70	1880
Inantas Bajo	30	54	308	8	400
Inantas Alto	8	20	70	10	108
Cochaverde	12	22	131	10	175
Tablón Obraje	30	10	155	15	210
San Pedro Obraje	30	30	81	60	201
Corazón de Jesús Neighborhood	35	78	311	48	472
Fátima Neighborhood	30	40	250	30	350
Bolívar Neighborhood	30	100	240	80	450
El Vergel	10	40	110	40	200
Buena Esperanza	30	20	210	20	280

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the minor land unit of Pilcuán, most of the population is in the adult range, followed by the population of over 66 years.

In the minor land unit of El Pedregal, most of the population equal to 72.28%, is in the range of adults from 18 to 65 years, followed by the school-age population between 6 to 17 years equal to 22.39%. In Inantas Bajo, 77% of the population is in the range of adults from 18 to 65 years, followed by the school-age population between 6 to 17 years equal to 13.5%.

According to this information, we can conclude that the population tends to grow because the child, school-age and adult population is significant with respect to the population older than 66 years. In Inantas Alto, 64.81% of the population is in the adult range of 18 to 65 years, followed by the school-age population between 6 to 17 years old with 18.51%. In Cochaverde, 74.85% of the population is in the adult range of 18 to 65 years, followed by the school-age population of 6 to 17 years, equal to 12.57%.

In Tablón Obraje, 73.80% of the population is in the range of adults from 18 to 65 years, followed by the child population between 0 to 5 years equal to 14.28%. In San Pedro Obraje, 40.29% of the population is in the range of adults from 18 to 65 years, followed by the population over 66 years equal to 29.85%. In the Corazón de Jesús neighborhood, 65.88% of the population is in the range of adults from 18 to 65 years, followed by the school-age population between 6 to 17 years equal to 16.52%. In Fátima, 71.42% of the population is in the range of adults from 18 to 65 years, followed by the school-age population between 6 to 17 years equal to 11.42%. In Bolívar, 53.33% of the population is in the adult range of 18 to 65 years, followed by the school-age population of 6 to 17 years, equal to 22.22%.

In the minor land unit of El Vergel, 55% of the population is in the range of adults from 18 to 65 years, that is, half of the population is grouped in this age range, which means that they are of working age. In Buena Esperanza, 75% of the population is in the adult range of 18 to 65 years, followed by the child population, corresponding to 7.14%

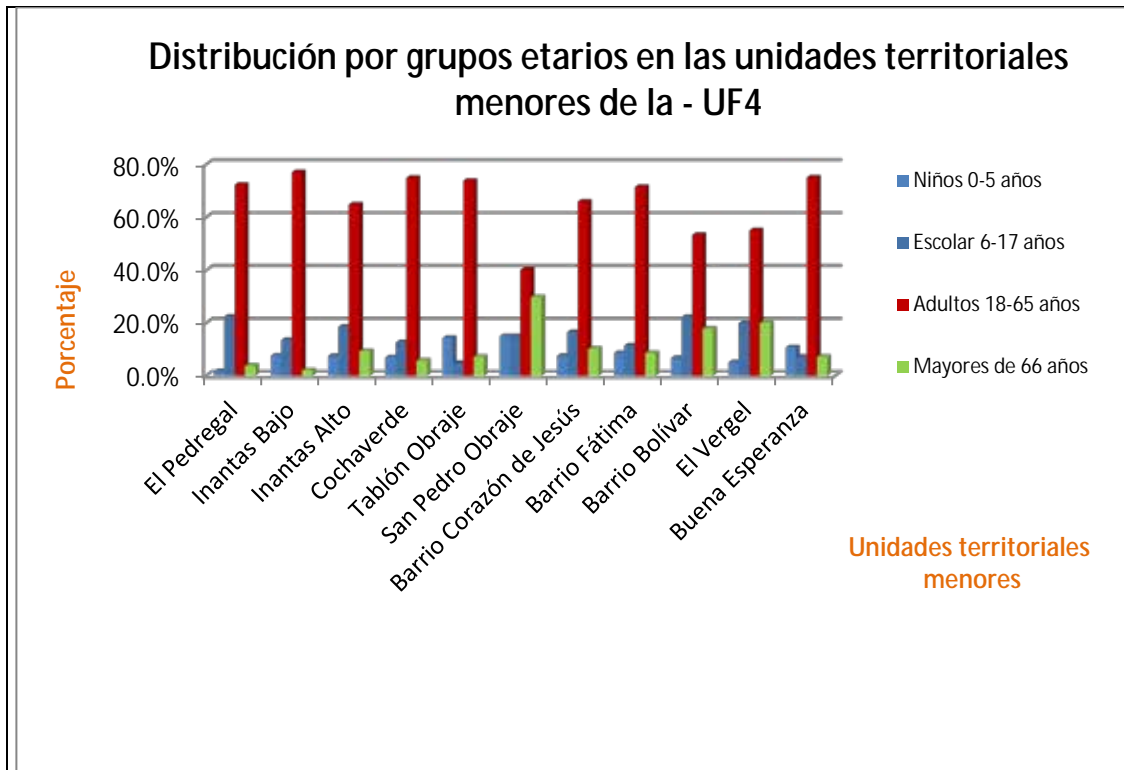


Figure 5.3.16 Distribution by age groups in the minor land units of FU 4  
Source (Géminis Consultores Ambientales S.A.S, 2016)

The following is the approximate population of the minor land units of functional unit 4, the percentage composition by gender, the number of families, the average number of people per family, as well as the number of dwellings in the village. We also identified an approximate number of people with a disability and the working-age population in each of the minor land units. We must clarify that the population impacted will not be specified in each land unit because the processes of social-property management that include addressing the population, purchasing land and the implementation of the respective social management measures will be carried out, with the purpose of guaranteeing social units equal and / or better living conditions, providing social support during the process of adaptation and appropriation of the new housing location or development of the productive activity, especially in cases where there are high and medium vulnerability ranges present, which according to the aforementioned resolution is understood as a "low capacity of the social unit to confront, assimilate or manage the alteration of living conditions related to aspects such as the loss of housing,

affection of basic social services, suspension of productive activities, among others; in accordance with the analysis of variables such as rooting, management capacity, adaptability, total or partial allocation of income, etc."

Pilcuán. The village has 2000 inhabitants approximately, of which 1200 belong to La Recta sector and 800 to the Pilcuán Viejo sector.

In Pilcuán, the Pilcuán Viejo sector, holds 300 families, with an average of 3 people per family, which are distributed in 300 houses, with an average of 1 family per household. The total population of the sector is 800 people, of which 570 are men with 71.3% and 230 women corresponding to 28.8%. Figure 5.1 shows the distribution of population by gender graph:

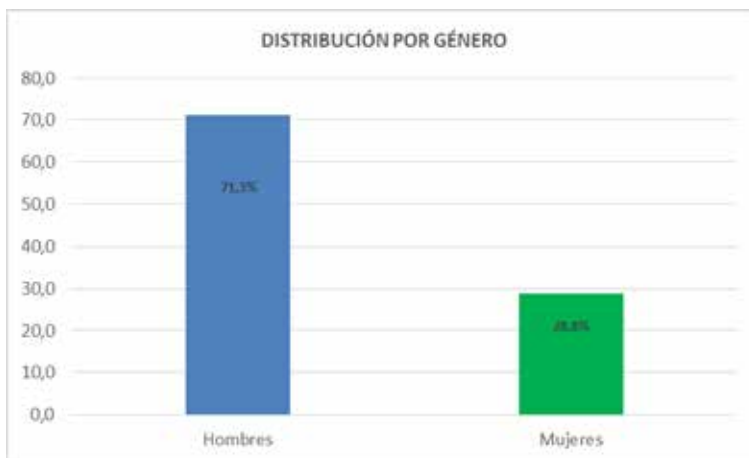


Figure 5. 1 Distribution by gender in Pilcuán, Pilcuán Viejo Sector  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

60 people were identified among this community with visual, hearing, language, mental and motor disability; large part is elderly. Considering the age groups, we estimate that in this sector there are 800 people of working age, equal to 50.0% of the total population, as seen in Error! The source of the reference cannot be found.

In Pilcuán, La Recta sector has approximately 1200 inhabitants, distributed in 250 families, which make up an average of 5 people, who live in 250 homes, located on the right and left side of the Pan-American highway. The distribution by gender is

represented by 580 women with 48.3% and 620 men with 51.7%. Figure 5. 2 shows this ratio:

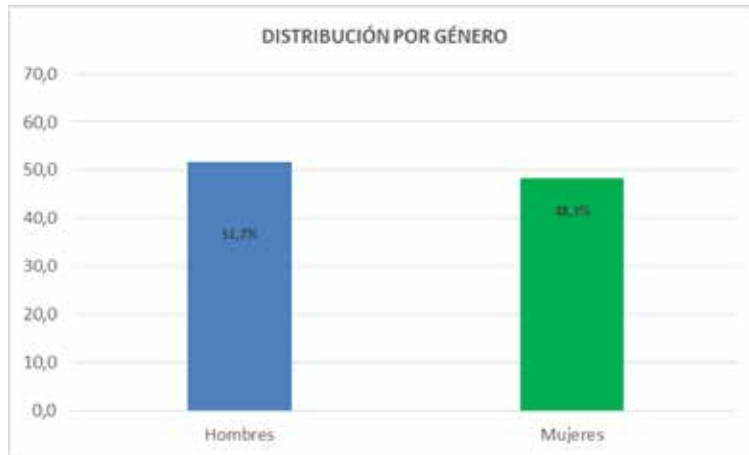


Figure 5. 2 Distribution by gender in Pilcuán, La Recta Sector  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

The population of this village does not register people with any disability. According to data collected by age groups, there are 1,200 people of working age, which corresponds to 88.9% of the total population.

El Pedregal. The village has 1880 inhabitants distributed in 400 families, which are made up on average of 4 people, who live in 600 homes located in the town center. It should be noted that there are more houses than families because some of the infrastructures belong to people who do not reside permanently in Pedregal and are only occupied on weekends or seasonally.

The population distribution in El Pedregal is represented by 1005 women, who represent 53.45% and 875 men, representing 46.54%.

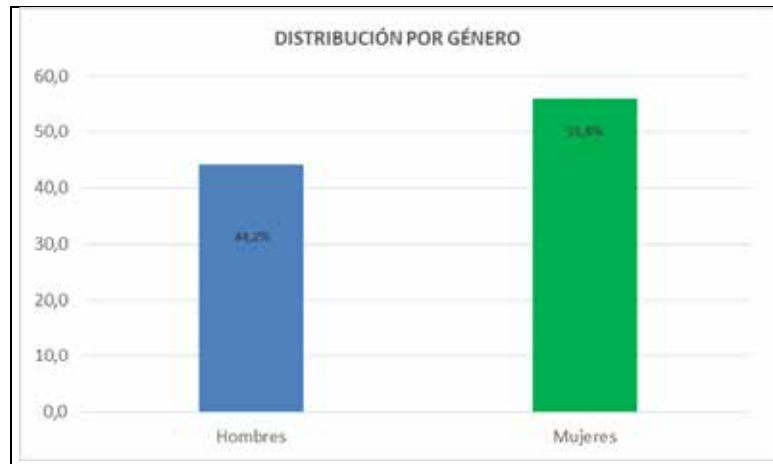


Figure 5.3.17 Distribution by gender in Pedregal  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

This populated center has reported 4 people with a condition of motor skill, hearing and thinking disabilities. Therefore, if only this element is taken into account, we can deduce that out of the total population, 99% of it would be able to work, although there is the possibility that they can't perform, given age issues.

Inantas Bajo. The number of inhabitants in the village of Inantas Bajo is 400 people, distributed in 100 families with an average of 4 people per household, who live in 80 dispersed homes.

The population distribution in the village of Inantas Bajo is represented by 170 women, who account for 42.5% and 230 men, which equals 57.5%, the largest population in the village.

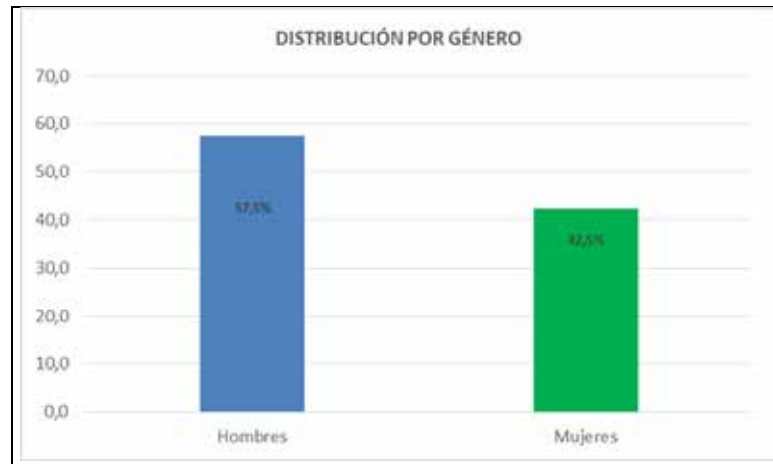


Figure 5.3.18 Distribution by gender in the Inantas Bajo Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

There is 1 person with a condition of hearing disability among the total population of the village, which indicates that the majority of adult inhabitants are able to work.

Inantas Alto. The village has 108 inhabitants, distributed in 36 families, which are made up on average of 3 people, who live in 30 homes located in a dispersed manner.

The population distribution in the village of Inantas Alto is represented by 46 women who represent 42.59% and 62 men who represent 57.40%.

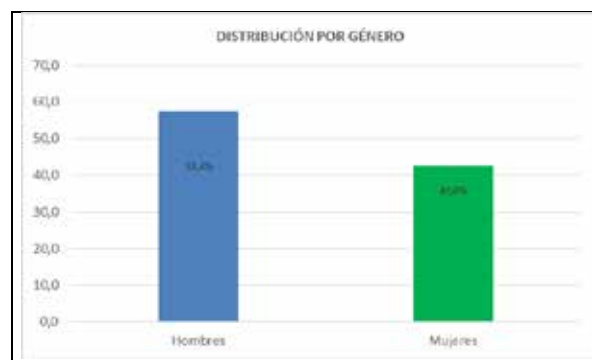


Figure 5.3.19 Distribution by gender in the Inantas Alto Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)



The population of this village does not register people with a disability, so we conclude that the 70 adults are able to work.

Cochaverde. The village has 175 inhabitants, distributed in 35 families, which are made up on average of 5 people, who live in 35 homes located in a dispersed manner.

The population distribution in the village of Cocha verde is represented by 85 women who correspond to 48.57% and 90 men who represent 51.42%. The following figure shows that the population difference between the female and male gender is not significant.

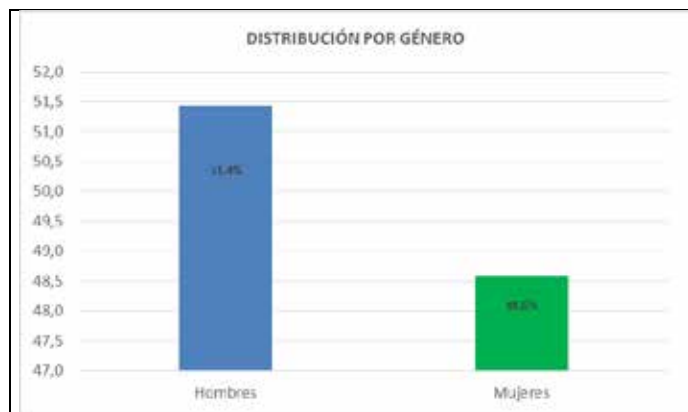


Figure 5.3.20 Distribution by gender in the Cochaverde Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

There are 6 people who present condition of motor skill, visual and hearing disability among the population in this village. Therefore, if one takes this into consideration, we can conclude that, out of the total population, 99% would be able to work.

Tablón Obraje. The village has 210 inhabitants, distributed in 70 families, which are made up on average of 3 people, who live in 70 homes located in a dispersed manner.

The population distribution in the village of Tablón Obraje is represented by 120 women which is equal to 57.14%, and 90 men who represent 42.86%.

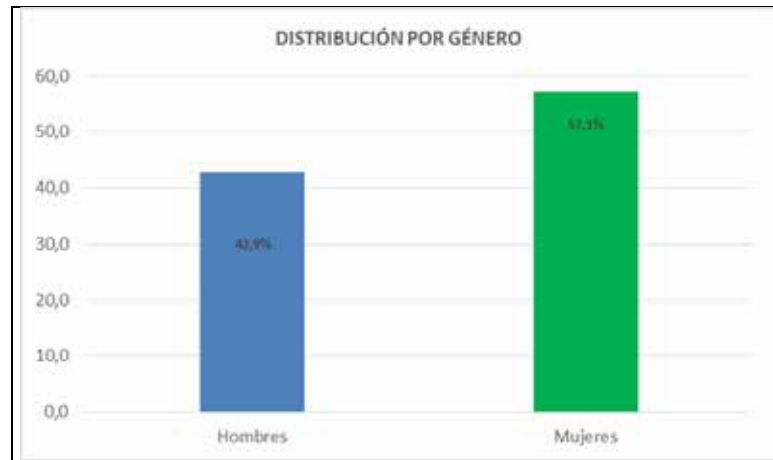


Figure 5.3.21 Distribution by gender in the Tablón Obraje Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 6 people have motor skills and language disabilities. Therefore, if we only take this element into account, we can conclude that, out of the total population, 99% would be able to work, although there is the possibility that they can't perform, given age issues.

San Pedro Obraje. The village has 201 inhabitants, distributed in 58 families, which are made up on average of 4 people, who live in 67 homes located in a dispersed manner.

The population distribution in the village of San Pedro Obraje is represented by 105 women which is equal to 52.23%, and 96 men who represent 47.76%.

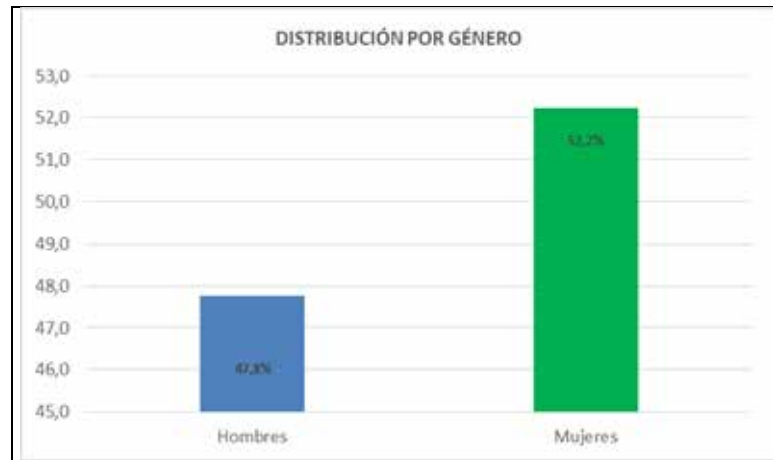


Figure 5.3.22 Distribution by gender in the San Pedro Obraje Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 5 people have motor skill-type and mental disabilities, which means that 196 people do not have any disability whatsoever and in general the adult population in the village is generally capable of working.

Corazón de Jesus de Tangua Neighborhood. This neighborhood has 450 inhabitants, distributed in 138 families, which are made up on average of 3 people, who live in 138 homes.

The population distribution in the Corazón de Jesús neighborhood is represented by 250 women who represent 57.62% and 200 men who represent 42.37%.

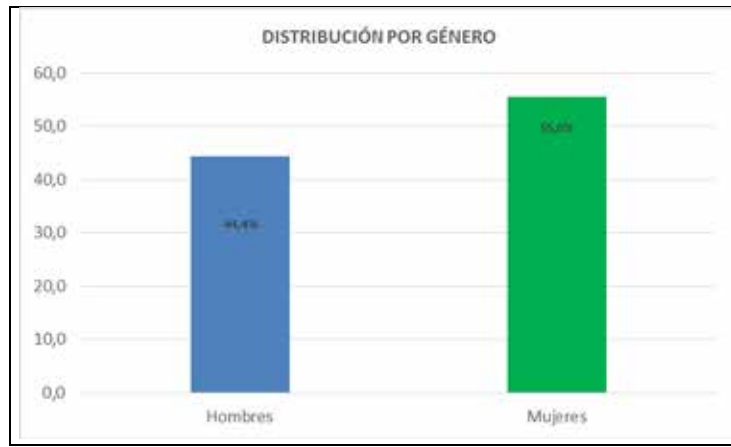


Figure 5.3.23: Distribution by gender in Corazón de Jesús neighborhood  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

There are 3 people with hearing and mental disabilities in this neighborhood, which indicates that the majority of the adult population is able to work.

Fátima de Tangua Neighborhood. The Fatima neighborhood has 350 people, distributed in 70 families with an average of 5 people per household, who live in 70 homes.

The population distribution in Fátima Neighborhood is represented by 200 women which is equal to 57.14%, and 150 men who represent 42.85%.

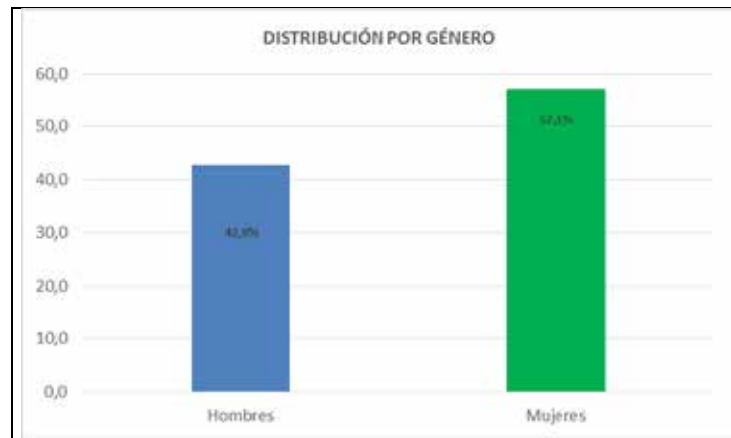


Figure 5.3.24 Distribution by gender in Fátima neighborhood  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

The population of this neighborhood does not register people with a disability, so we conclude that the 250 adults are able to work.

Bolívar de Tangua Neighborhood. This neighborhood has 450 inhabitants, distributed in 90 families, which are made up on average of 5 people, who live in 90 homes.

The population distribution in Bolívar neighborhood is represented by 250 women which is equal to 55.55%, and 200 men who represent 44.44%. The following figure shows that the population difference between the female and male gender is not significant.

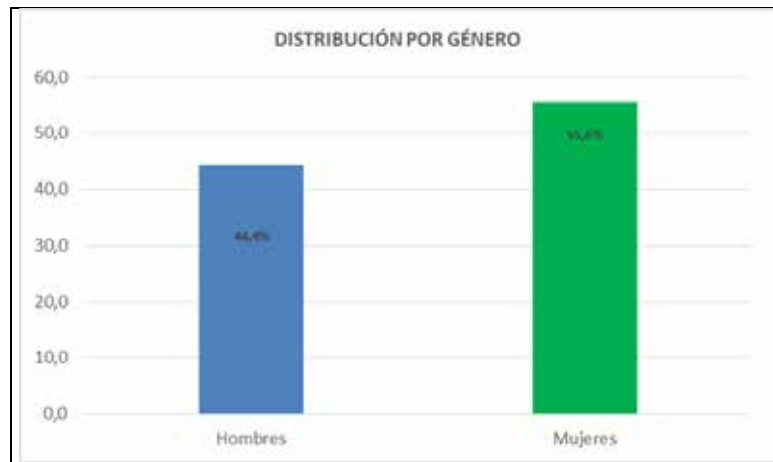


Figure 5.3.25: Distribution by gender in Bolívar neighborhood  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this neighborhood there are 2 people who are hearing impaired. Therefore, if we take this condition into account, we can conclude that out of the total population, 99% would be able to work, although they may not perform given their age.

El Vergel. The village has 200 inhabitants, distributed in 40 families, which make up an average of 6 people, who live in 40 homes located in a dispersed fashion.

The population distribution of El Vergel village is made up of 120 women, who represent 60% and 80 men equal to 40%, which makes the female population, the largest in this village.

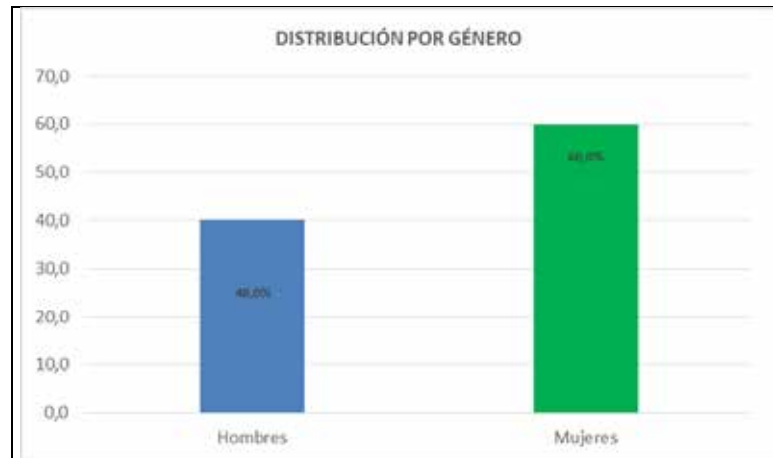


Figure 5.3.26 Distribution by gender in El Vergel Village  
Source: Village Data Sheet, (Géminis Consultores S.A.S.,2016)

Seven people in this village have motor skill, visual, hearing and language disabilities. Based on this, we conclude that most people do not have any type of disability and that most of the adult population is able to work.

Buena Esperanza. The total population of Buena Esperanza is 280 people, the number of families that live in the village is 72, with an average of 4 people per family, distributed in 80 homes.

In the Buena Esperanza neighborhood there are 160 men and 120 women, representing 57.14% and 42.85% respectively. The figure shows the distribution of the population by gender.

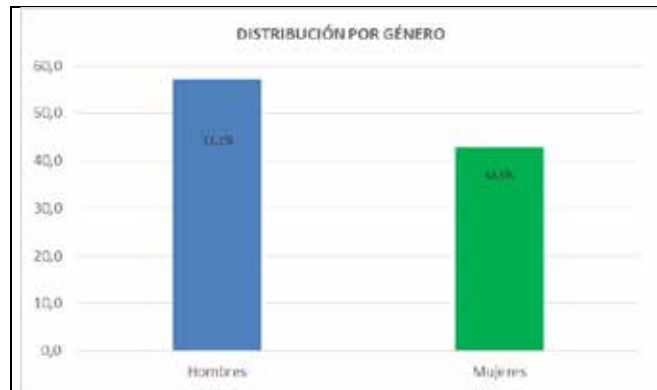


Figure 5.3.27 Distribution by gender in Buena Esperanza Village  
Source: Village Data Sheet, (Géminis Consultores S.A.S.,2016)

Out of the total population of 280 inhabitants, 3 people were identified as having visual, mental and motor skill disabilities. Therefore, if this alone was taken into account, we can conclude that, of the total population, 99% would be able to work, although there is the possibility that they can't perform, given age issues.

Family typology: In the minor land units of functional unit 4, there are nuclear families, extensive, of one person and reconstituted families, the extended family defined as that composed by paternal figures, children and other family members as grandparents, parents, uncles, nephews among others, is predominant. We must also highlight the formation of nuclear families, that is, a home made up of a primary conjugal nucleus (head of household and spouse without children, or head and spouse with children, or head with children).

Longitudinal analysis: According to the information available from the minor land units, we can analyze the demographic trends, because in order to perform a longitudinal analysis, the same group of people must be investigated repeatedly over a period of years, sometimes decades, and given the characteristics of the present study, as well as the scant or null demographic information on the villages, the analyzed items respond to the need for basic information to follow up the changes that occur in the area, as a consequence of the project.

Form of land tenure

Given that the owner land tenure type is most predominant, the right to make decisions about how to use the land, whether to use it for grazing, the decision on which crops to plant and to benefit financially from the sale of crops, the right to sell or to mortgage the land, to transmit it to its successors by inheritance, to create a lease or sharecropping mechanism that recognizes the right to use the land under previously specified conditions to the tenant or sharecropper, are all consolidated. Table 5.3.16 shows land tenure in the minor land units of functional unit 4, according to the percentage reported by the village data sheet applied.

Table 5.3.8 Land tenure in the minor land units of functional unit 4

Minor land unit	Owners	Lease holder	Sharecropper	Holders
Pilcuán	87.5%	5%	-	7.5%
El Pedregal	95%	-	-	5%
Inantas Bajo	80%	-	10 %	10%
Inantas Alto	100 %	-	-	-
Cochaverde	100 %	-	-	-
Tablón Obraje	100 %	-	-	-
San Pedro Obraje	100 %	-	-	-
Corazón de Jesús Neighborhood	80%	20%	-	-
Fátima Neighborhood	100 %	-	-	-
Bolivar Neighborhood	80%	20%	-	-
El Vergel	100%	-	-	-
Buena Esperanza	100%	-	-	-

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the minor land units of functional unit 4 Owners are the predominant land tenure, followed by holder and leaseholder. "A holder exercises his/her rights as lord and owner over a property that he / she does not own" (Mutis). That is to say, the tendency



that is observed in the minor land units of FU 4 corresponding to the municipalities of Imués, Yacuanquer and Tangua, is of acting as owners.

#### Presence of population in a situation of forced displacement

The problem of displacement in Colombia has created a change in national geography since the 1990s when it became more evident. Globally, displacement and migration of people as a result of violence have increased and with these phenomena, the quality of life of thousands of families has been impacted negatively.

According to the information provided in the village data sheet, we report the arrival of the following number of families to the minor land units of the area of influence due to forced displacement. The number of people in these families is an average 5.

Table 5.3.9 Presence of population in a situation of forced displacement in the minor land units of FU 4

Minor Land Units	Nº of families	Place of origin
Pilcuán	17	Other departments
El Pedregal	2	Putumayo
Inantas Bajo	3	Putumayo
Inantas Alto	0	
Cochaverde	0	
Tablón Obraje	2	Other departments
San Pedro Obraje	3	Funes and Guaitarilla
Corazón de Jesús Neighborhood	0	
Fátima Neighborhood	0	
Bolivar Neighborhood	1	Tumaco and Putumayo

El Vergel	0	
Buena Esperanza	0	

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

The minor land units of functional unit 4 are not really considered villages that receive population in a situation of forced displacement. The Pilcuán minor land unit is known for being a recipient of this population.

The families that have settled in Pilcuán, El Pedregal, Inantas Bajo, Tablón Obraje, San Pedro Obraje, Bolivar de Tangua, come mainly from the department of Putumayo.

According to the data presented in Table 5.3.17, we may conclude that those who participated in completing the village data sheet did not identify that the presence of population in a displacement situation has had an impact on the receiving community.

#### Settlement Patterns

In Functional Unit 4, the population settled in the minor land units is disperse, in Pilcuán, El Pedregal and in the Tangua neighborhoods, the settlement is more of a nucleated type. See Table 5.3.18

Table 5.3.10 Patterns of settlement in the minor land units of FU 4

Minor Land Units	Nucleated	Disperse
Pilcuán	100%	-
El Pedregal	100%	-
Inantas Bajo	-	100%
Inantas Alto	-	100%
Cochaverde	-	100%
Tablón Obraje	-	100%
San Pedro Obraje	-	100%
Corazón de Jesús Neighborhood	100%	-
Fátima Neighborhood	100%	-
Bolivar Neighborhood	100%	-

El Vergel	-	100 %
Buena Esperanza	-	100%

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

The category of dispersed settlements is commonly used to refer to rural populations. Many factors are involved in the study of settlement patterns and how they are organized. Common places or gathering places like markets, are often important. There are other factors such as geography, social-cultural elements such as family structure, religion and sociability, as well as the way in which houses or groups of houses are traditionally constructed and arranged.

Some of the inhabitants of FU 4 minor land units migrate to other municipalities of the department, Ecuador and Pasto, in search of better possibilities. There are no significant differences related to gender, the largest population group is in the ages between 18 and 65 years, economically productive ages.

Functional Unit 5.1

#### Population Group Characterization

According to the information obtained in the village data sheets, in the majority of minor land units in Functional Unit 5.1, the settled population is farmers; the following villages refer to the existence of some indigenous families:

In the village of Gualmatán Alto, the inhabitants are of farmer and indigenous origin. The indigenous communities of the village belong to the Quillasinga ethnic group. However, so far they are not legally organized, but are currently in the process of recognition.

In El Tambor village, the inhabitants are 100% farmers. However, according to the information provided in the application of the village data sheet, the population stated that Tialapi and Pueblo Viejo are ethnic communities that are in the process of recognition.

At the time of founding the Catambuco township, the settled community belonged to the indigenous town council of the Quillasinga ethnic group known as Catambuy. This territory is recognized as an indigenous reserve, but with time the type of population has been fluctuating and it now includes farmers, indigenous and mestizos.

In El Páramo village, the inhabitants are farmers and indigenous inhabitants. Likewise, in other villages of the municipality of Tangua there are ethnic communities in process of recognition.

Once the information concerning the population groups present in the area of influence of the project was analyzed, we found that in the minor land units of the municipalities of Tangua, Imues and Yacuanquer, the farmer population predominates, whereas in the municipality of Pasto we identify the presence of settlers or mestizos with transit from rural to urban population.

The presence of indigenous population is an important aspect to be highlighted. We must consider that the Ministry of the Interior certified the presence of the councils of Catambuco and Montaña de Fuego in the area of influence of the project.

#### Population Dynamics

El Cebadal. The territory that is currently occupied by the village of El Cebadal was a small town in which its inhabitants lived off barley and wheat crops. From 1896, it became known as El Cebadal.

In the course of the last 5 years, a few permanent residents have arrived. However, people also arrive to the village temporarily during the holiday season and at the end of the year, or to visit their relatives.

Chávez. A father named Paz arrived to the territory that is currently occupied by the Chávez village, he organized the territory in parcels where the first inhabitants were located.

El Tambor. The village data sheet mentions the date of creation of the village in the year 1950. Two versions are reported regarding this event: one is that it was founded by two people belonging to indigenous communities and the other version refers to it as being created by an indigenous person with a person of Spanish origin.

In the end of year and Easter holidays, a larger number of people come to the village. People who come to visit relatives temporarily come from another department.

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On the other hand, there have been 30 people leaving the village, the reasons are associated with the search for job opportunities. According to the information collected in the village data sheet, the destination are other municipalities.

El Páramo. The date of creation of the village was 1952. Founded more than 70 years ago, initially it was a ranch; 65 years ago lots were sold to work on them. The family of Miguel Lagos and José Navarrete is still remembered as the first to inhabit this area.

The patron saint festivities and holidays are the events that attract more tourists to this town, as well as visiting relatives. The people who arrive temporarily come from other villages of the municipality and other municipalities of the department.

In 2015, 5 people left the village; the reasons are associated with job search and education. According to the information collected during the application of the village data sheet, the place of destination of these people was primarily the municipal seat.

In the last 5 years a new population has arrived attracted by the characteristics of this land.

La Palizada. The year 1960 is mentioned in the village data sheet as the date of creation of the village. The founders were the Meneses, Lopez, Concha and Guerrero families. Additional information states that the educational institution was built 25 years ago and the Chapel 15 years ago.

The patron saint festivities, Holy Week and weekends are the dates that attract tourists, as well as visits to relatives. The people who arrive temporarily come from other villages of the municipality and the country of Ecuador.

In the last 5 years 3 families have left in search of job opportunities and because of property sales. According to the information collected in the village data sheet, the destination of these people was another municipality.

Marqueza Bajo. The date of creation of the village was in the year 1980. Reports tell that Rafael Noguera, Clara Popayán and Alfredo Payan asked Mr. Neftalí to collaborate to

constitute the village and the name originated because these lands were part of a ranch that belonged to Mr. Navarrete with the same name.

A greater number of people come to the village at the end of year, patron saint festivities, Easter and harvests. The people who arrive temporarily come from other municipalities of Nariño and other villages of the municipality.

The population that has left the village has done so in search of education and for military service. According to the information gathered in the village data sheet, the place of destination of these people were other municipalities and departments.

In the last 5 years the arrival of new people to the village has not been recorded.

Los Ajos. The village data sheet mentions 1880 as its date of creation.

The community of Los Ajos, has been influenced by an environmental culture that manifests itself in the behavior of the population and the practices that are developed in the area. This happens due to its proximity to the Galeras Sanctuary of Flora and Fauna, leading to the presence of environmental actors who constantly watch over natural resources.

A greater number of people to the village during the patron saint festivities and end of year celebrations. Those who come temporarily to visit their relatives, come from other villages of the municipality, other municipalities of Nariño and other departments.

In the middle of 2015, 10 people between youths and adults left the village, the reasons are associated with the search for work opportunities and education. According to the information collected in the village data sheet, the place of destination was municipal seats and another municipalities.

In the last 5 years no new people have arrived to the village.

Marqueza Alto. The village was created in the year 1974 with the name of Marqueza by a ranch that bore this same name. Subsequently, this ranch was parceled out and people like Rafael Riascos, Juvenal Timaná, Jesús Calderón and Manuel Santacruz arrived; they were the first settlers after this division.

The largest number of people arrive during the patron saint, end of year, Easter festivities, weekends and during the holidays. They come temporarily to visit their relatives and come from other villages of the municipality.

The community of the village has been influenced by an environmental culture, which is manifested in the behavior of the population and the practices that are carried out in the area. The above, due to its proximity to SFF Galeras, leading to the presence of environmental actors who constantly watch over the care of natural resources, in addition to the presence of students from Universidad de Nariño, who train the community in terms of conservation and agroecological practices.

The departure of the village of the Riascos family in 2014 and the Calderón family in 2006 happened because they wanted to change their lifestyle. According to the information collected in the village data sheet, the destination of these people was another municipality.

The population that has come to the village in the last 5 years has done so for family reasons and work.

Gualmatán Alto. The land where the village of Gualmatán Alto is located today belonged to an indigenous settlement. According to information gathered in the village data sheet, Gualmatán Alto was created in 2002.

Travelers arrive at the village most frequently during the weekends, the patron saint festivities and in Holy Week.

Temporary arrival of people is due to tourism or labor needs and they come from other villages of the municipality of Pasto and the indigenous reserve.

In the last 5 years, 17 people have left the village looking for better job opportunities, going to other villages in the municipality of Pasto or other municipalities. However, it is pertinent to point out that people have come to work as stewards.

Vocacional. Vocacional was founded in the year 1971. It is the oldest village with respect to others in the municipality of Pasto and it is part of the area of influence of the

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Pedregal - Catambuco sector in the Rumichaca - Pasto Road Project. The property originally belonged to the ranch of the Hiestroza family and in turn, this family sold its lands to Mr. Luis Estrada.

The flow of visitors to the village increases during holidays and weekends. Temporary visitors come from other villages in the same municipality and other municipalities in the department of Nariño.

Cubiján Alto. The year of creation of the village dates from 1950, being the first settlers: Petrona Narváez and Rafael Nañez, Ricardo Eraso, Pedro Santacruz. Formerly Cubiján and La Palizada were a single village, it was known as Cubiján de Flores. Subsequently with the creation of the Pan-American highway, it was divided into Cubijan Alto and Bajo. Historically these villages have maintained permanent social relations. Although they are formally divided for purposes of land zoning, they are united by their internal dynamics, so much so that today its older settlers perceive them as a single land unit. In this sense, we must consider that it is divided for the present study for formal matters, however, the reality is different, since in the event of separating them because of the low impact of the project towards Cubijan Bajo, it is evident that the division would generate conflict, not only internal conflicts over the potential jobs that the project can generate, but it could affect the good relations between these communities. Therefore, it is important for the project to consider that when intervening in these villages, it should be careful not to be the origin or cause of a conflict that could be generated by treating them independently or prioritizing one village over the other with the actions that it furthers.

In the last years some inhabitants have left the village in search of job opportunities, moving to Bogota and Ecuador. The time of the year in which more people arrive to the village is weekends, holy week and patron saint celebrations. The festivities that are celebrated are: Christmas, Saint Francis in the month of October and the Virgin of Guadalupe celebrations in May. Other people who come to the village are athletes (cyclists).

The reasons for arriving temporarily to the village are tourism, work and family visits; they come from other municipalities like Sandoná, Funes, Pasto, Tangua, Yacuanquer.

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In the last 5 years, the arrival of new inhabitants is due to the search for work, to buy premises and because of tranquility in the environment.

Cubiján Bajo. Luna, Ortega and Carlosama families, who own the ranches where Cubijan Bajo is currently located, were its founders in 1935. The first settlers came in search of work. The first School was created in 1970 and the Mixed Rural School of Cubijan Bajo was founded in the year 1972.

Visitors arrive at the village more frequently at the end of the year and during Holy Week. Family visits are the main reason for people who travel temporarily and they come from other departments, municipalities of Nariño, or from Ecuador.

In the last years, 5 families have left the village in search of job opportunities or to study, moving to the municipal seat, other villages or other municipalities. The reason for the arrival of new inhabitants in the last 5 years is due to people looking for work.

This allows us to point out that there may be changes in population dynamics, since the flow of people entering and leaving the village in search of employment opportunities generates new settlements and cultural exchange.

La Merced. Founded in 1956. Formerly known as El Espino village. Its name was in honor of the Virgin of La Merced.

The patron saint festivities take place on September 24, which is the day of the Virgin of Las Mercedes, a celebration that is traditional in different Hispanic populations of the American Continent. The largest number of tourists during the year arrive on this date. Temporary visitors travel for work reasons and come from other villages of the same municipality.

On the other hand, new workers have come to the village in the last 5 years, to join the work of nearby farms.

San José de Catambuco. Created in 1980. The property that currently make part of this village was located in the Zarama ranch, and belonged to the Guadalupe village.

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The founders were Fidel Martínez, Julio Mirama and Eduardo Díaz; another important person in these first years was Mr. Guillermo Carlosama.

The arrival of people to the village is recorded in greater numbers during the Easter holidays and the end of the year and occasionally for visiting relatives; these people come from outside the department. Those who have come to live in the last 5 years have changed their residence by buying property in the village.

Catambuco. The village data sheet states that 1810 was the year of creation of the village. In the lands where Catambuco is currently located, an indigenous town council was established around the year 1924. In 1934, it was recognized as township and by that time the people who did not belong to the town council decided to change their residence.

Patron saint and end of the year festivals are the events that attract more tourists to this territory. People arriving temporarily come from different parts of the country, villages of the same municipality and indigenous reserves.

On the other hand, there has been no departure of people recorded except for non-indigenous families who opted to leave the ethnic territory voluntarily. In the last 5 years a new population has arrived attracted by the low cost of public services.

Huertecillas. Carlos Maigual is remembered as the first person to start the settlement of the village, along with 8 other families from the village of Gualmatán in 1991. The current land was sold by the Phillipian nuns to the Religious Congregation of nuns that arrived at Pasto at the end of 1961. The productive capacity of these lands brought upon the name of Huertecillas, granted to the village.

The holidays and the end of the year are the times in which the greatest number of people visit the village. Trips for work reasons are eventually made from villages in the municipality of Pasto or from other departments.

#### Population trends and Population structure

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Table 5.3.19 and Figure 5.3.30 show the distribution by age group, where the group of adults from 18 to 65 is the largest (89.37%), mainly in La Merced (86%), and Gualmatán Alto (83.33%), indicating that the majority of the population is of working age. It is followed by the age group between 6 and 17 years, mainly in Cubiján Alto (56.17%), Catambuco (41.66%) and El Tambor (40%). The minor land unit of Catambuco stands out for having the largest number of inhabitants and the minor land unit of Chávez, the lowest number of inhabitants; followed by Huertecillas and Vocacional.

Table 5.3.11 Distribution by age group in the minor land units of FU 5

Minor land unit	Children 0-5 years	School-age 6-17 years	Adults 18-65 years	Over 66 years old	Total
El Cebadal	58	93	409	90	650
Chávez	5	10	85	20	120
El Tambor	50	200	170	80	500
El Páramo	30	100	470	100	700
La Palizada	12	25	233	30	300
Marqueza Bajo	25	40	280	20	365
Los Ajos	36	44	180	40	300
Marqueza Alto	60	60	125	15	260
Gualmatán Alto	25	30	350	15	420
Vocacional	14	30	90	16	150
Cubiján Alto	40	150	70	7	267
Cubiján Bajo	25	60	309	40	434
La Merced	25	40	473	12	550
San José de Catambuco	20	40	715	25	800
Catambuco	2000	5000	3500	1500	12000
Huertecillas	14	30	90	16	150

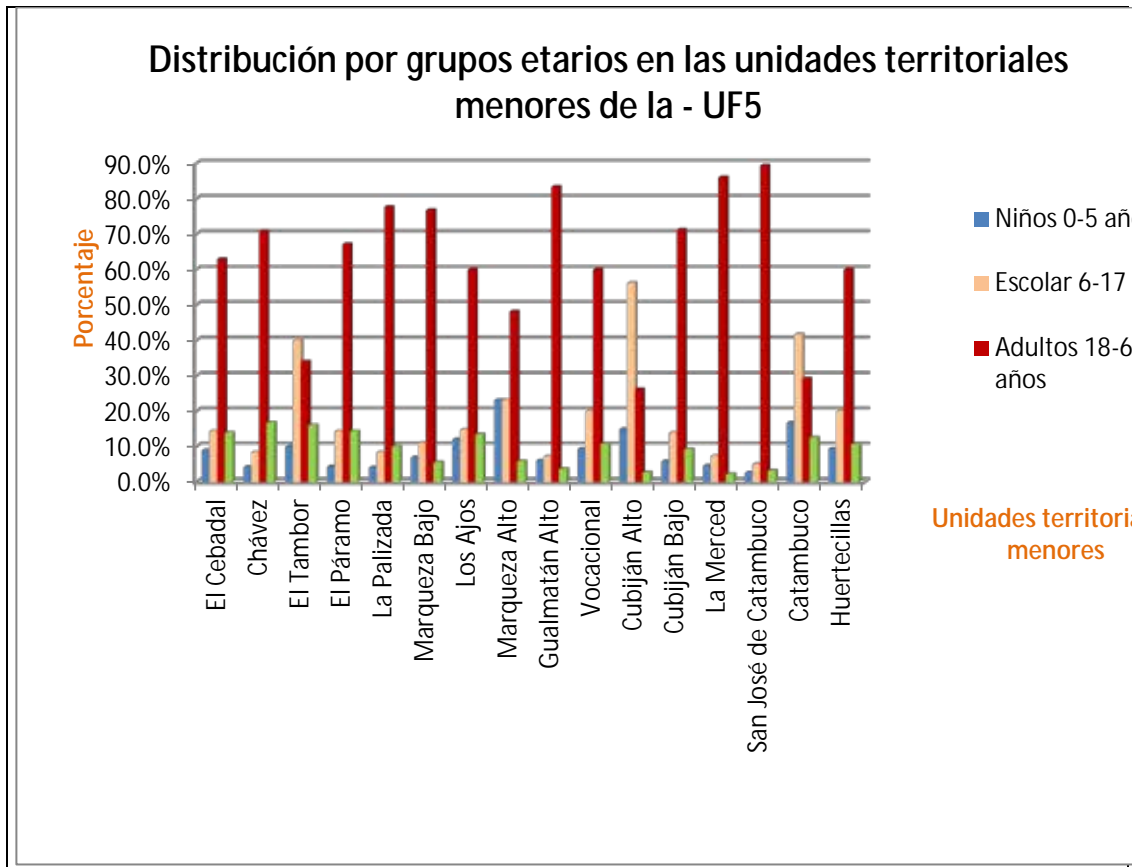


Figure 5.3.28 Distribution by age groups in the minor land units of FU 5

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

According to the information, in the minor land unit of El Cebadal we can see that 62.92% of the population is in the range of adults from 18 to 65 years, followed by the school-age population of 6 to 17 years with 14.30%. In Chávez, 70.83% of the population is in the range of adults from 18 to 65 years, followed by the population over 66 years equal to 16.6%. In El Tambor, 40% of the population is in the school-age range from 6 to 17 years, followed by adults from 18 to 65 years, corresponding to 34% of the population. In El Páramo, 67.14% of the population is in the range of adults from 18 to 65 years, followed by the school-age population equal to 14.28%. Considering the values, we can conclude that the child population in the village is very small compared

to the total population. In the Palizada 77.66% of the population is in the range of adults from 18 to 65 years old being the largest group, followed by the population over 66 years equal to 10%. In Marqueza Bajo, 76.71% of the population is in the adult range of 18 to 65 years, this age group being largest, followed by the school-age population of 6 to 17 years with a share of 10.95%.

In the minor land unit of Los Ajos, 60% of the population is in the range of adults from 18 to 65 years, followed by the school-age population equal to 14.66%. Therefore, we can conclude that the infant population is small in comparison to the rest of population groups, which clearly has an impact on its growth. In Marqueza Alto, 48.07% of the population is in the adult range of 18 to 65 years of age followed by the child and school-age population, registering an equal percentage of 23.07% for each one, showing a tendency to growth in this population. In Gualmatán Alto 83.33% of the population is in the adult range of 18 to 65 years, followed by the school-age population equal to 7.14%.

In the minor land unit of Vocacional, 60% of the population is in the range of adults from 18 to 65 years, followed by the school-age population equal to 20%. In Cubiján Alto, the school-age population stands out with 56.17%, followed by the adult population with 26.21%. In Cubiján Bajo the highest concentration of the population 71.19% is in the group of adults from 18 to 65 years, followed by the school-age population with 13.82%. In La Merced, 86% of the population is in the adult range of 18 to 65 years, followed by the school-age population with 7.27%. In San José de Catambuco, 89.37% of the population is in the adult range of 18 to 65 years, followed by the school-age population equal to 5%. In Catambuco, 41.66% are in the school-age population range of 6 to 17 years, evidencing that the tendency of the population tends to increase, 29.16% in the range of adults from 18 to 65 years. In the minor land unit of Huertecillas, 60% of the population is in the adult range of 18 to 65 years, followed by the school-age population equal to 20%.

The following is the approximate population of the minor land units of Functional Unit 5.1, the percentage composition by gender, the number of families, the average number of people per family, as well as the number of dwellings in the village. We will also identify an approximate number of people with a disability and the working-age population in each of the minor land units. We must clarify that the population impacted will not be specified in each land unit because the processes of social-property

management that include addressing the population, purchasing land and the implementation of the respective social management measures will be carried out, with the purpose of guaranteeing social units equal and / or better living conditions, providing social support during the process of adaptation and appropriation of the new housing location or development of the productive activity, especially in cases where there are high and medium vulnerability ranges present, which according to the aforementioned resolution is understood as a "low capacity of the social unit to confront, assimilate or manage the alteration of living conditions related to aspects such as the loss of housing, affectation of basic social services, suspension of productive activities, among others; in accordance with the analysis of variables such as rooting, management capacity, adaptability, total or partial allocation of income, etc."

El Cebadal. The village has 650 inhabitants, distributed in 208 families, which are made up of average of 4 people, who live in 198 dispersed homes.

The population distribution in the village of El Cebadal is represented by 361 women which is equal to 55.53%, and 289 men who represent 44.46%.

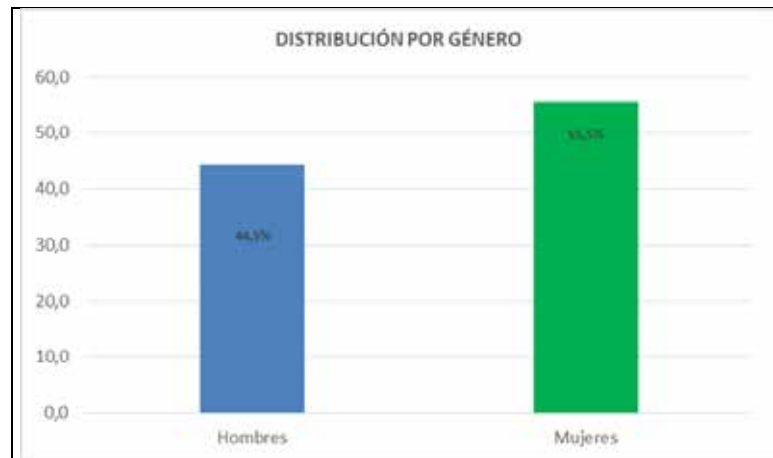


Figure 5.3.29 Distribution by gender in El Cebadal Village

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 25 people have hearing, visual, language and motor skill disabilities; therefore, the majority of the adult population in general is able to work.

**Chávez.** The village has 120 inhabitants, distributed in 30 families, which are made up on average of 4 people, who live in 30 dispersed homes.

The population distribution in the village of Chávez is represented by 80 women which is equal to 66.7%, and 40 men who represent 33.3%.

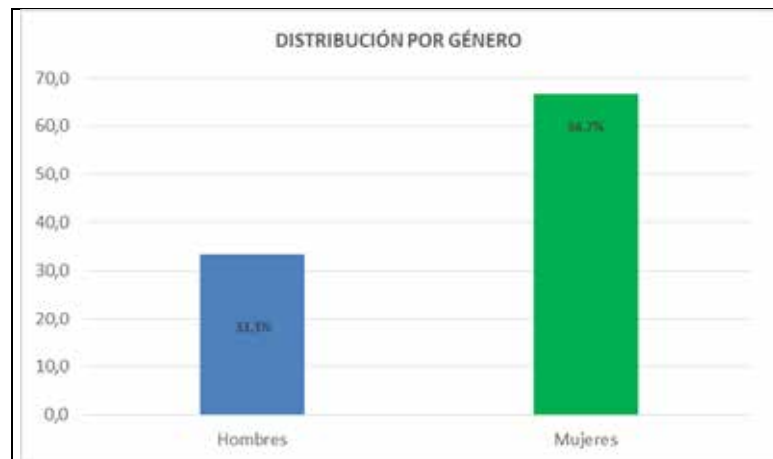


Figure 5.3.30 Distribution by gender in Chávez Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

**El Tambor.** The number of families that live in the village is 125 with an average of 4 people per family, which are distributed in 100 homes.

In regard to the distribution by gender, we found that 200 are men and 300 women, meaning 40% men and 60% women, therefore we conclude that the majority of the population corresponds to the female gender.

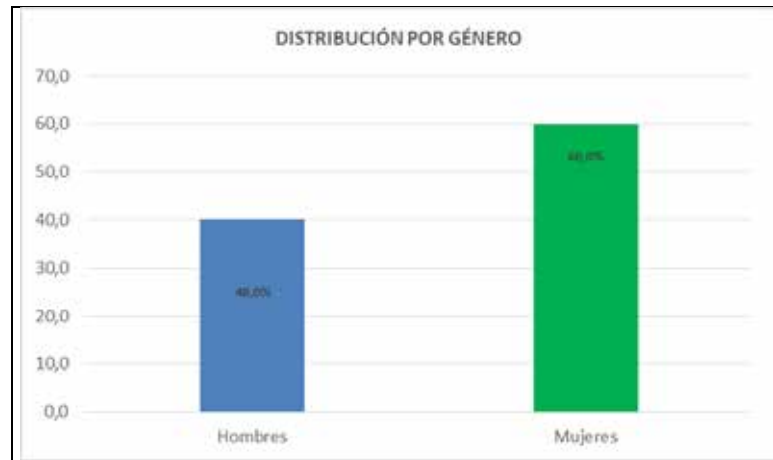


Figure 5.3.31 Distribution by gender in El Tambor Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

50 people in the village have a visual, hearing, language, mental and/or motor skill disability; this is a limiting condition for the population of working age to satisfactorily fulfill the job posts that the sector offers.

El Páramo. The number of families that live in the village is 120 with an average of 5 people per family, which are distributed in 86 homes.

The total population of the village of El Páramo is 700 people, of which 420 are women and 280 men. That is, 40% of the population are men and 60% are women.

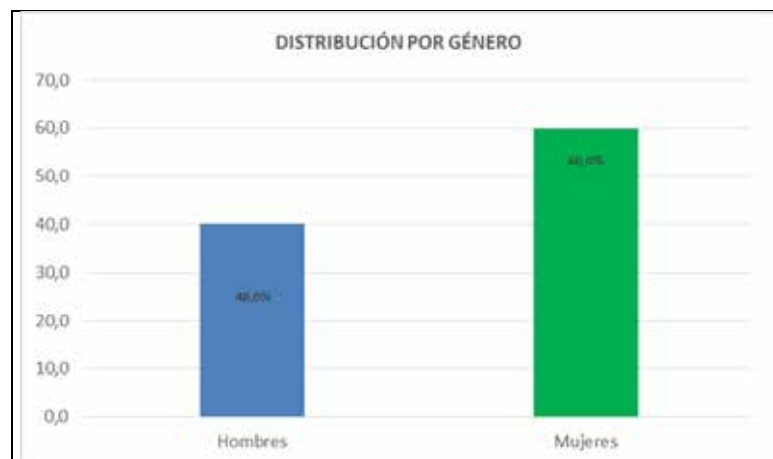




Figure 5.3.32 Distribution by gender in El Páramo Village

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the village, 5 people were identified as having a motor skill and mental disability, therefore, most of the inhabitants do not have any disability and are generally able to work.

La Palizada. The number of families living on the village is 75, with an average of 4 people per family, distributed in 90 homes.

The total population of the village of La Palizada is 300 people, of which 120 are men and 180 women; 40% men and 60% women. The graph shows the distribution of the population by gender.

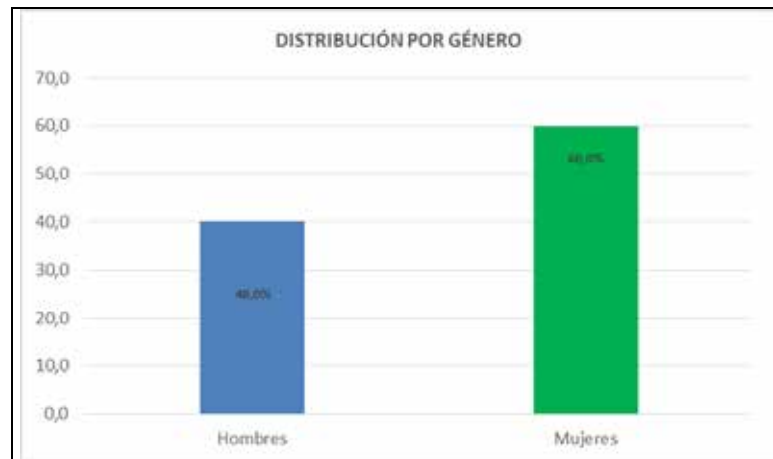


Figure 5.3.33 Distribution by gender in La Palizada Village

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

Among the entire population, 6 people were registered as visually impaired, which means that most people do not have disabilities and that most of the adult population is able to work.

Marqueza Bajo. The number of families that live in the village is 100 with an average of 5 people per family, which are distributed in an average of 75 homes.

Regarding the distribution by gender, we found that, of the 365 inhabitants, 146 are men and 219 women, 40% men and 60% women, that is, most of the population is female.

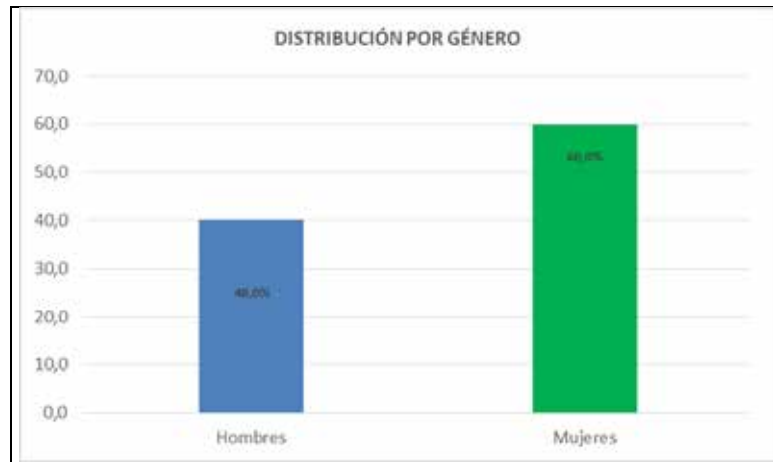


Figure 5.3.34 Distribution by gender in Marqueza Baja Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

Two people in the village were identified as being visually impaired, which means that most of the inhabitants do not have a disability and that most of the adult population is able to work.

Los Ajos. The number of families that live in the village is 92 with an average of 5 people per family, which are distributed in 100 homes.

The total population of the village of Los Ajos is 300 people, of which 120 are men and 180 women; 40% men and 60% women.

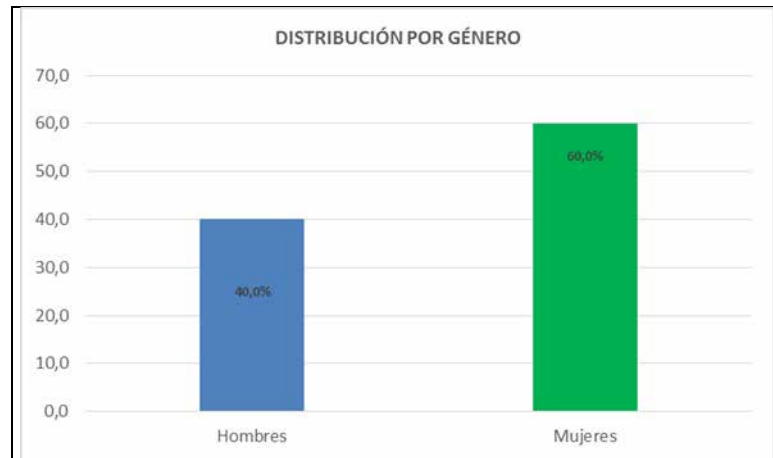


Figure 5.3.35 Distribution by gender in Los Ajos Village

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

Ten people in the village have a motor skill and mental disability, which means that most people are not disabled and that the adult population in general is able to work.

Marqueza Alto. The number of families that live in the village is 80, with an average of 3 people per family, distributed in 65 houses.

Regarding the distribution by gender, we found that, of the 260 inhabitants, 104 are men and 156 women; 40% men and 60% women, that is, most of the population is female.

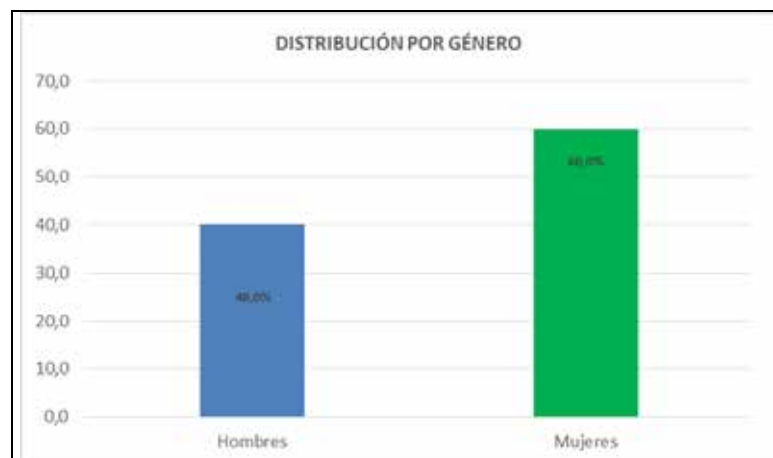


Figure 5.3.36 Distribution by gender in Marqueza Alto Village

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 3 people were identified as having a motor skill disability. This indicates that most of the inhabitants do not have a disability, and for the most part the adult population is in normal working condition.

Gualmatán Alto. The number of families that live in the village is 105, with an average of 4 people per family, distributed in 70 houses.

The total population of the village of Gualmatán Alto is 420 people, of which 190 are men and 230 women; 45.23% men and 54.76% women.

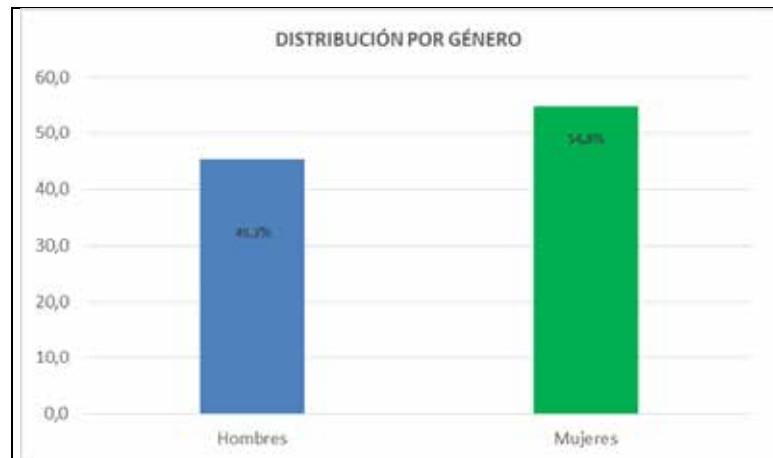


Figure 5.3.37 Distribution by gender in the Gualmatán Alto Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 10 people were identified as having a motor skill and language disability. This allows to conclude that most of the population does not have any disability and, in turn, that most of the adult population of the village is in proper condition to work.

Vocacional. The total population of Vocacional is 150 people, the number of families that live in the village is 30, with an average of 5 people per family, distributed in 14 homes.

Regarding gender distribution, 70 are men and 80 are women; 46.66% men and 53.33% women.

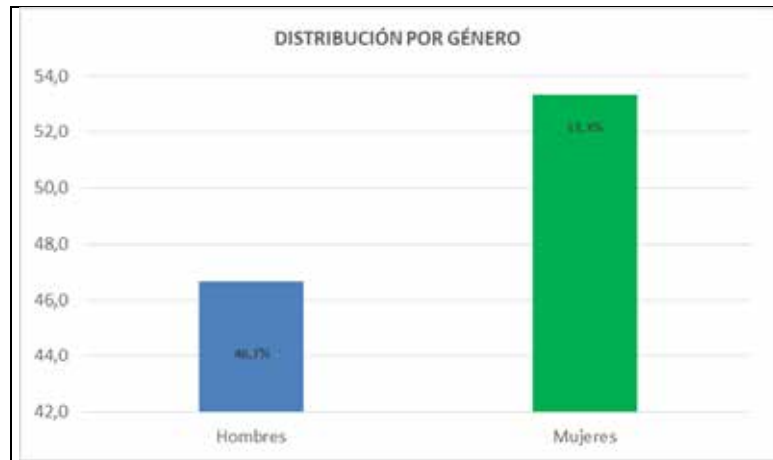


Figure 5.3.38 Distribution by gender in Vocacional Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the village of Vocacional, we did not find people with disabilities, therefore, we conclude that the entire adult population is able to work.

Cubijan Alto. The total number of inhabitants in the village of Cubijan Alto is 267; the number of families living in the village is 93, with an average of 2 families per household and 7 persons per family, which are located in 87 homes.

Regarding gender distribution, we found that 132 are men and 135 women, which in percentages corresponds to 49.4% men and 50.6% women, which leads us to conclude that there is a balance in the distribution by gender.

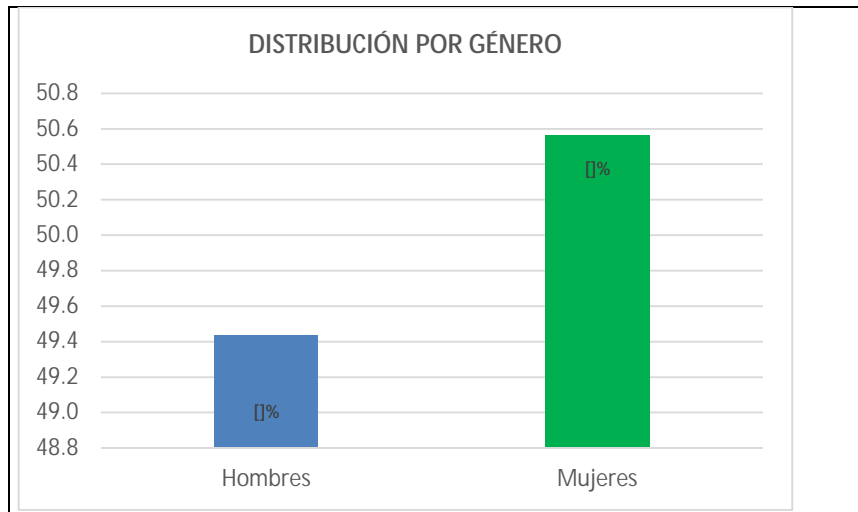


Figure 5.3.39 Distribution by gender in the Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 1 person was identified as having a motor skill disability (lower limb amputation), which allows us to conclude that the rest of the population does not have a disability and that the adult population is able to work.

Cubiján Bajo. The number of families living in the village is 200, with an average of 6 people per family, who are distributed in 130 homes.

The total population of the village of Cubijan Bajo is 434 people, of which 200 are men and 234 women; 46.08% men and 53.91% women.

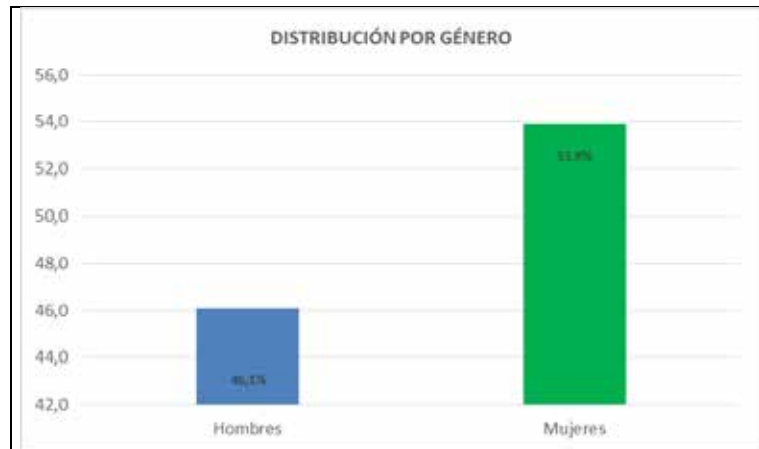


Figure 5.3.40 Distribution by gender in the Cubijan Bajo Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the information provided in the village data sheet, 8 people were identified with a visual, hearing, language and/or mental disability condition. As a result, most of the adult population in the village is able to work.

La Merced. The total number of inhabitants in the village of La Merced is 550; the number of families living in the village is 132, with an average of 5 persons per family, who are located in 110 homes.

In regard to the distribution by gender, we found that 165 are men and 385 women, meaning 30% men and 70% women, therefore we conclude that the majority of the population corresponds to the female gender.

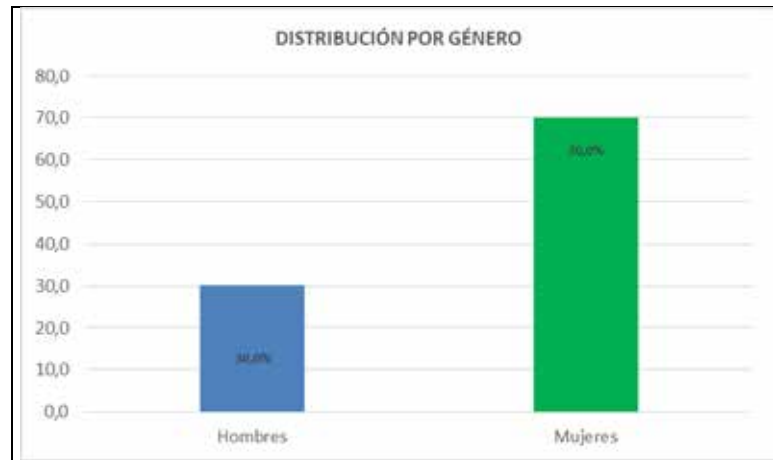


Figure 5.3.41 Distribution by gender in La Merced Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In this village, 3 people were identified as having a motor skill disability. This indicates that most of the inhabitants do not have a disability, and for the most part the adult population is in normal working condition.

San José de Catambuco. The total number of inhabitants in the village of San José de Catambuco is 800; the number of families living in the village is 160, with an average of 5 persons per family, who are located in 70 homes.

Regarding the distribution by gender; 400 inhabitants are men and 400 women. Therefore, we conclude that the population of the village is equitable in terms of the share of each gender.



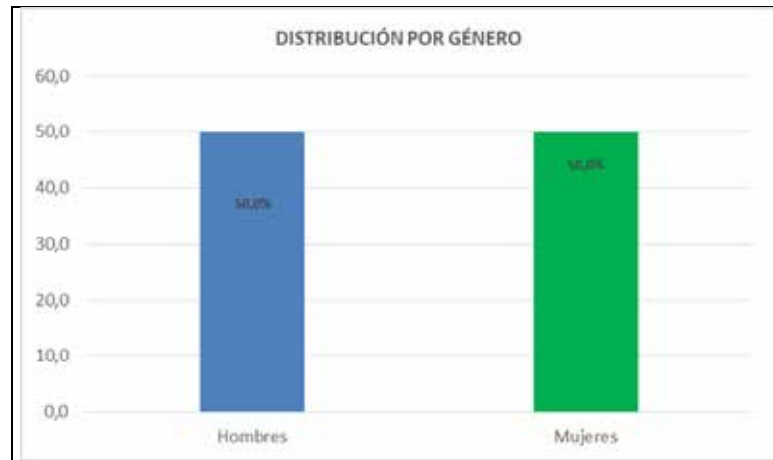


Figure 5.3.42 Distribution by gender in the San José de Catambuco Village  
Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

Out of the entire population, 2 people were identified as having motor skill disabilities, therefore, we concluded that much of the adult population is able to work.

Catambuco. The total population of the village of Catambuco is 12,000 people, where the number of families that live on the village is 2,200, with an average of 5 people per family, who are located in 2,200 homes.

Regarding the distribution by gender, we found that, 5000 are men and 7000 women; 41.66% men and 58.33% women, that is, most of the population is female.

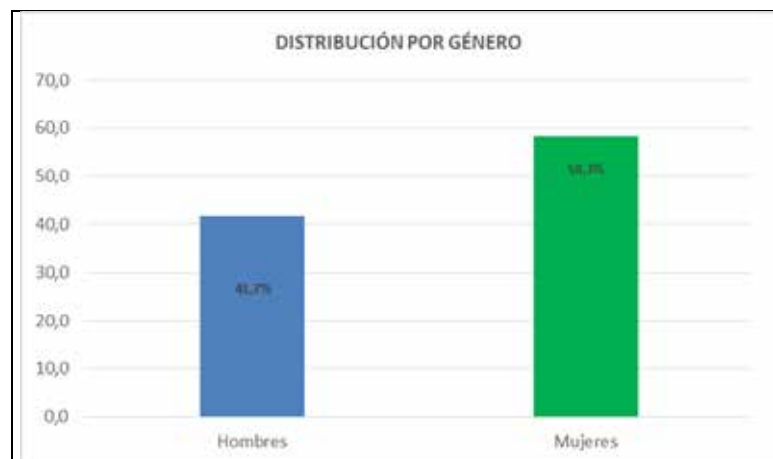


Figure 5.3.43 Distribution by gender in Catambuco

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the village, we identified 600 people who have a visual, hearing, language, mental and/or motor skill disability.

Huertecillas. The total population of Huertecillas is 150 people, the number of families that live in the village is 23, with an average of 4 people per family, distributed in 20 homes.

Regarding gender distribution, 67 are men and 83 are women; 44.66% men and 55.33% women.

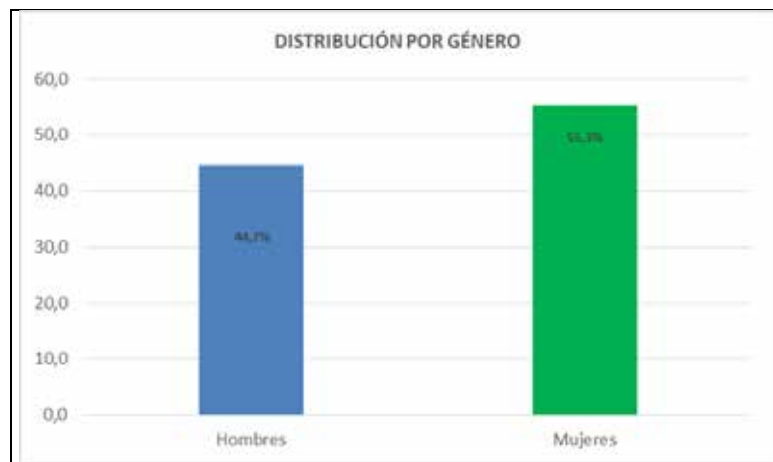


Figure 5.3.44 Distribution by gender in the Huertecillas Village

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the village of Huertecillas, we did not find people with disabilities, therefore, we conclude that the entire adult population is able to work.

Family typology: in the minor land units of Functional Unit 5.1 there are nuclear families, extensive, of one person and reconstituted families; the nuclear family defined as that formed by a primary conjugal nucleus (head of household and spouse without children, or head and spouse with children, or head with children) is predominant, and second are extended families, that is, those composed of parents, children, grandchildren, grandparents, uncles, cousins.

Longitudinal analysis: According to the information available from the minor land units, we can analyze the demographic trends, because in order to perform a longitudinal analysis, the same group of people must be investigated repeatedly over a period of years, sometimes decades, and given the characteristics of the present study, as well as the scant or null demographic information on the villages, the analyzed items respond to the need for basic information to follow up the changes that occur in the area, as a consequence of the project.

#### Form of land tenure

Given that the Owner land tenure type is most predominant, the right to make decisions about how to use the land, whether to use it for grazing, the decision on which crops to plant and to benefit financially from the sale of crops, the right to sell or to mortgage the land, to transmit it to its successors by inheritance, to create a lease or sharecropping mechanism that recognizes the right to use the land under previously specified conditions to the tenant or sharecropper, are all consolidated. Table 5.3.16 shows land tenure in the minor land units of functional unit 4, according to the percentage reported by the village data sheet applied.

Table 5.3.12 Land tenure in the minor land units of functional unit 5.1

Minor land unit	Associative	Owners	Lease holder	Holders
El Cebadal	-	70%	3%	27%
Chávez	-	90%	10%	
El Tambor	-	90%	10%	
El Paramo	-	100%		
La Palizada	-	80%	10%	10%
Marqueza Bajo	-	100%	-	-
Los Ajos	-	95%	5%	-
Marqueza Alto	-	97%	3%	-

Gualmatán Alto	-	60%	30%	10%
Vocacional	-	100%	-	-
Cubiján Alto		80%	-	20%
Cubiján Bajo	-	90%	10%	-
La Merced	-	90%	10%	-
San José de Catambuco	-	100%	-	-
Catambuco	-	80%	10 %	10 %
Huertecillas	-	99%	-	1%

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

In the land units of FU 5.1, the form of ownership of land is predominant, since, for all Villages, the percentage is higher than 80%, except in Gualmatán Alto. There are holders in El Cebadal, Gualmatán Alto, Catambuco, Cubiján Alto, La Palizada and Huertecillas. A low percentage of leaseholders exists in El Cebadal, Los Ajos, Marqueza Alto. The village where there are more leaseholders is in Gualmatán Alto. That is, the trend observed in the minor land units corresponding to the municipalities of Tangua and Pasto, in relation to land tenure is to own property.

#### Presence of population in a situation of forced displacement

The following table indicates the presence of population in a situation of forced displacement in the minor land units of Functional Unit 5.1. As seen in the table, Catambuco is considered a populated center receiving population under a condition of forced displacement. The place of origin of this population are other municipalities of the department of Nariño and other departments of Colombia.

Table 5.3.13 Presence of population in a condition of forced displacement in the minor land units of FU 5.1

Minor Land Units	Nº of families	Place of origin
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El Cebadal	-	-
Chávez	-	-
El Tambor	10	Other municipalities, other departments.
El Paramo	-	-
La Palizada	-	-
Marqueza Bajo	-	-
Los Ajos	-	-
Marqueza Alto	-	-
Gualmatan Alto	-	-
Vocacional	-	-
Cubiján Alto	-	-
Cubiján Bajo	-	-
La Merced	-	-
San José de Catambuco	-	-
Catambuco	200	Nariño and other departments.
Huertecillas	0	

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

We acknowledge that in Catambuco there are approximately 1000 people under a condition of displacement, which corresponds to 200 families, coming from other regions of the department and other departments.

The minor land units of Functional Unit 5.1 are mostly not considered Villages receiving population under a condition of forced displacement. Families that have settled in Catambuco and El Tambor come from other departments.

According to the data presented in Table 5.3.21, we may conclude that those who participated in completing the village data sheet did not identify that the presence of population in a displacement situation has had an impact on the receiving community.

#### Settlement Patterns

Table 5.3.22 shows the settlement patterns of the minor land units of Functional Unit 5.1. In this functional unit, we noticed that the population settles in a dispersed way, and in Catambuco in a nucleated fashion. In the case of Gualmatán Alto, although in the village data sheet has shown that the settlement is of a nucleated type, we have also realized during our visits that there is a pattern of dispersed settlement. The dispersed rural population is characterized by living in a rural area in country houses, very distant from each other.

Table 5.3.14 Patterns of settlement in the minor land units of FU 5.1

Minor Land Units	Nucleated	Disperse
El Cebadal	-	100 %
Chavez	-	100%
El Tambor	-	100%
El Paramo	-	100%
La Palizada	-	100%
Marqueza Bajo	-	100%
Los Ajos	-	100%
Marqueza Alto	-	100%
Gualmatan Alto	100%	-
Vocacional	-	100%
Cubiján Alto	-	100%
Cubiján Bajo	-	100%
La Merced	-	100%
San José de Catambuco	0%	100%
Catambuco	100%	0%
Huertecillas	0%	100%
El Cebadal	0%	100%

Source: Village Data Sheet, (Géminis Consultores Ambientales S.A.S., 2016)

Studies show that the school-age population enters school late and shows an early entry into the labor market.

The rural population requires relevant educational alternatives that consider geographic, social and cultural characteristics, to bring schools closer to their communities and reduce the gap between the rural and urban scenarios.

No significant differences are identified with respect to gender, the highest population concentration is between 18 and 65 years, considered as economically active.

The highest percentage of population under a condition of displacement is in the township of Catambuco. This population group comes from different regions of Nariño and other departments such as Cauca and Putumayo.

### 5.3.3 Spatial component

This component shows a summary of the public residential utilities and the social services that exist in the municipalities of Imués, Yacuanquer, Tangua and Pasto in the department of Nariño, including the minor land units of each of the municipalities mentioned, which are part of the area of influence of the Pedregal - Catambuco sector of the Rumichaca - Pasto road project; this seeks to provide a descriptive approach around the current situation of services in terms of coverage, quality, associated infrastructure and other elements that may be of interest for the environmental impact assessment.

#### 5.3.3.1 Major land units

##### Functional Unit 4

Municipalities of Imués, Yacuanquer and Tangua:

Below is the coverage in percentages of the public utilities of the municipalities of Imues, Yacuanquer and Tangua, in the urban area (U) and in the rural area (R), information obtained from the 2012-2015 development plans of the respective municipalities and compiled in the following table:

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Table 5.3.15 Public Utilities Coverage Functional Unit 4

MUNICIPALITY	AQUEDUCT		SEWAGE		SANITATION		ENERGY		GAS		TELECOMMUNICATIONS. INTERNET		TRANS
	U	R	U	R	U	R	U	R	U	R	U	R	U
	%	%	%	%	%	%	%	%	%	%	%	%	%
IMUÉS	97%	73.0%	87.3%	31.7%	90%	30%	98%	93%	0%	0%	100%	64%	70%
YACUANQUER	99%	99%	93.8%	7%	97%	25%	100%	99%	0%	0%	100%	64%	70%
TANGUA	99%	89%	85%	0%	89%	0%	97%	91%	0%	0%	80%	80%	100%

Source (Géminis Consultores Ambientales S.A.S, 2016)

## Public Utilities

### Waterworks and Sewage

According to the municipal development plans of Imués, Yacuanquer and Tangua for the 2012-2015 period, the three municipalities have aqueduct service in the urban area, supplied by companies: ASUASPIM in Imués, EMPAAAYAC SAS ESP in Yacuanquer and EMPOTANGUA in Tangua, which ensure adequate and efficient service in the urban sectors. The three municipalities have a system of urban aqueduct and others for villages, Imués has 21, Yacuanquer 13 and Tangua 33 rural aqueduct systems, of which a minimum amount have a disinfection system which allows to conclude that water is suitable for human consumption, with the exception of the municipality of Yacuanquer where none have a treatment and / or disinfection system and some have no plumber, these are the responsibility of Associations and village water management boards, who are concerned about providing a good service, up to now, the quality is fair.



In terms of sources of supply for the urban areas of these three municipalities, the following are outstanding: La Chorrera in Imués in the Municipality of Túquerres, in Yacuanquer the Magdalena stream and in Tangua La Fuente (streams) Santa Isabel



Image 5.3.1 Pedregal Aqueduct - Municipality of Imués, Area of Influence for the Rumichaca-Pasto road project. Origin Magna Colombia Planar Coordinates E 960521,469607314 N609363, 468877042  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.2 Pedregal Aqueduct - Area of Influence for the Rumichaca-Pasto road project. Origin Magna Colombia Planar Coordinates E 958041,062 N 608231,564

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Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.3 Yacuanquer aqueduct. Planar Coordinates Origin Magna Colombia E 964891,570526839 N6037802455 N

Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.4 Tangua Nariño Aqueduct - Chlorine plant. Planar Coordinates Origin Magna Colombia E 964290,350685744 N 613194,639896887

Source (Géminis Consultores Ambientales S.A.S, 2016)

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According to the PDM (2012-2015) of the municipalities of Imués, Yacuanquer and Tangua, the sewerage service in the urban sectors has a wide coverage, although the quality is fair since despite having a system of collection and evacuation of waste water, it does not comply with the dumping regulations when being discharged directly to rivers.

In addition, the Development Plans mentioned also define the sewerage service in the rural sector, specifying that the municipalities of Imués and Yacuanquer have this service, although with low coverage and its quality is fair since wastewater is discharged directly into water sources that are contaminated affecting the population and the environment. The problem of Sewage Deficiency is even more visible in Tangua where there is zero coverage of this service.

Due to the above, we have concluded that there is irregular coverage and quality of sewage in the three municipalities mentioned, generating a social-environmental impact due to the lack of an adequate process of wastewater provisions.

#### Solid waste collection and disposal systems

According to the municipal development plans of Imués, Yacuanquer and Tangua for the 2012-2015 period, the three municipalities have the system for collection and disposal of waste in the urban area, the collection is done through a municipal dump and final waste disposal is made in the sanitary landfill of the Municipality of Pasto, which signifies a very good coverage in this sector.

Likewise, the Development Plans showed a low coverage of this service in the rural areas of the municipalities of Imués and Yacuanquer, and the null provision of this service in the rural sector of Tangua. This makes informal techniques of burning, open pit dumps and disposal of waste in water streams proliferate in the rural areas of the three municipalities.

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In conclusion, the solid waste collection and disposal service in these municipalities is poor, and there is a need in the urban and rural sectors to expand the coverage and quality of this service, and in the specific case of the rural sector of Tangua, it's necessary to have an optimum service, generating better management of solid waste disposal and a positive impact on the environment.

#### Energy and telecommunications

According to the (2012-2015) PDM for the municipalities that make up Functional Unit 4 of the Pedregal-Catambuco sector in the Rumichaca-Pasto road project, we identified that the provision and maintenance of the system of electricity distribution grids in urban and rural areas is under the administration of CEDENAR S.A. ESP, who is responsible for providing a high quality service with single-phase and three-phase transformers, high, medium and low voltage grids, provision of frequent service and high coverage.

The domestic gas service is not available, the three municipalities are supplied with this fuel through the supply of 33, 40 and 100 lb pipettes by ENERGAS Y MONTAGAS, which are sold for residential use.

#### Public transportation

In relation to the information found in the Development Plans of the municipalities in Functional Unit 4 of the present road project, we understand that Imués, Yacuanquer and Tanga transport of cargo and passengers services at municipal and intermunicipal levels, through: Transipiales, Pasto, Rutas del Sur, Transandona and Expreso Juanambu; at the rural level in the three municipalities there is presence of informal transport through the modality of motorbike-taxis and some private vehicles. It should be noted that Tangua is the only one that has registered transport companies such as Taxtangua in charge of transporting passengers from the capital of Nariño to its municipal seat, there are also cooperatives that provide this service between the villages: COOTRANSTAN LTDA and Cooperativa Expreso Tangua.

On the other hand, according to information of third parties, the coverage of public transport is good for the three municipalities, although it does not yet cover 100%, and

the quality is fair due to the lack of a comfortable and safe car fleet, especially the informal transport service at the rural level.

To see a summary of the coverage of public utilities and services in FU 4, rural and urban sectors, see: Figure 5.3.47 and Figure 5.3.48

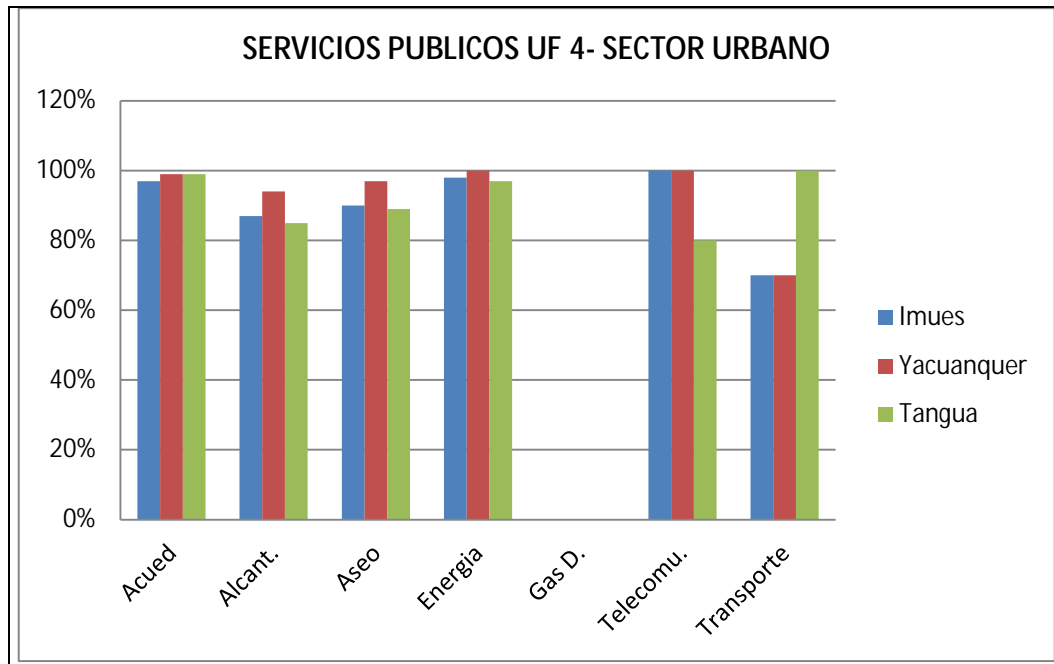


Figure 5.3.45 Summary coverage of public services FU 4- urban sector  
Source (Géminis Consultores Ambientales S.A.S, 2016)

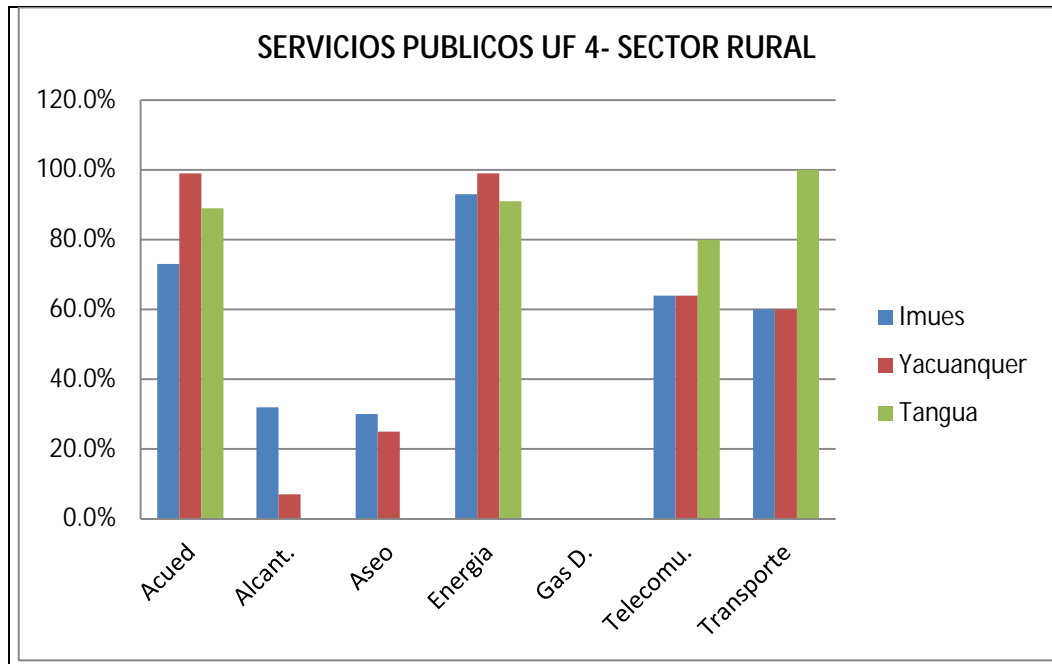


Figure 5.3.46 Summary coverage of public services FU 4 - rural sector  
Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Internet access

Imués, Yacuanquer and Tangua, have telephony and mobile internet; supplied mainly by TIGO-MOVISTAR and CLARO companies, both in rural and urban areas in different coverage percentages, whose quality becomes fair, since the signal varies depending on the topographic location of the villages and municipal seats.

By way of conclusion, the graphs show that the coverage in relation to municipal public services differs between the urban and rural sectors in terms of coverage and quality, mainly in sewage, sanitation, telecommunications and internet services. Coverage is insufficient, which renders the rights of citizens vulnerable by not providing them with basic services, and causes pollution to proliferate in the environment, which also leads to a serious health problem.

In terms of telecommunications and the internet, the deficit is even lower, and it is also accentuated in the rural sector due to the low coverage in signal because of the location of the villages and lack of infrastructure expansion.

### Social Services

#### Academic and Health Infrastructure

We identified the educational infrastructure of the municipalities of Imués, Yacuanquer and Tangua through the Municipal Development Plans, knowing the following: In Imués there are 19 Educational Institutions with a school coverage of 85.46%; In Yacuanquer there are 23 establishments that host a population of 97% of the entire school age population and Tangua has 32 education establishments providing a school-age population coverage of 86.10%.

It is worth mentioning that educational establishments are distributed in the urban and rural sectors. Educational Institutions offer levels of education from preschool, primary and secondary education; the schools offer preschool through fifth grade in basic elementary which are associated to an Educational Institution.

According to the information collected, we could establish that the infrastructure of educational establishments is classified as fair and poor in terms of the low number of classrooms, inadequate finishes (gates, floors and walls), school restaurants, sanitary units and scarce recreational areas.



Image 5.3.5 I.E. Pedro León Torres. Municipality of Yacuanquer. Planar Coordinates Origin Magna Colombia E 964391,427589392 N 615400,960504489 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.6 I.E. Misael Pastrana Borrero. Tangua. Planar Coordinates Origin Magna Colombia E 964290,350685744 N 613194,639896887 Source (Géminis Consultores Ambientales S.A.S, 2016)

In terms of health services, the three municipalities have an infrastructure to provide health services, each has a hospital center arranged for outpatient care in the urban



center, and in the rural sector 3 health centers for each municipality: Imués in the sectors of Pedregal, Santa Ana and Pilcuan Viejo, Yacuanquer in the villages of San Felipe, Chapacual and Tasnaque, and Tangua in the township of Santander and in the villages of San Rafael and Las Palmas.

Imués and Yacuanquer have an infrastructure and level of attention or quality of service that are fair, while Tangua has the Local Health Office, who performs inspection, oversight and quality control, and through such actions it must ensure the proper operation of the municipality and its registered entities, to guarantee an adequate provision of services to the population.



Image 5.3.7 Centro de Salud Yacuanquer.  
Planar Coordinates Origin Magna Colombia  
E 963847,449964722 N 614916,474068251  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.8 Centro de Salud Tangua.  
 Planar Coordinates Origin Magna Colombia  
 E 964700,663555669 N 612688,156260994  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

### Recreational and sports infrastructure

The PDMs, show that each municipality has a recreational and sports infrastructure, they all have a municipal park, as well as a sports center and courts in some of the educational institutions; however, the sports infrastructure of Imués is in fair condition, which means that it is important and necessary to manage resources aimed at their improvement and maintenance. On the other hand, Tangua also has a recreational park called "Del trigo la cebada y el maíz" (Wheat barley and corn) with three sports centers, two swimming pools, a communal lounge, children's games, green areas and a walking or social gathering trail. (Tangua A. M., 2012-2015) Space that allows healthy recreation for all the population and tourists.



Image 5.3.9 Parque del trigo la cebada y el maíz.  
 Planar Coordinates Origin Magna Colombia  
 E 965245,395623585 N 612926,059428888  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

### Housing

Regarding housing in these municipalities, we can state that most of the population is settled in the rural sector, Imués has 2430 dwellings of which 209 are in the urban area and 2221 are distributed in the rural area, (Imues, 2012) Yacuanquer has 2617, of which 679 are in the urban area and 1825 are distributed in the rural sector. (Yacuanquer A.M., 2012) Tangua has 2417 homes, 619 located in the urban area and 1798 in the rural sector. (Tangua A.M., 2012).

On the other hand, the infrastructure in the urban sector is characterized by its brick and combined (brick, adobe, wood) walls and floors in tile, cement and ceramics, which are mostly in good condition, while in the Rural sector the constructions are in earth, rammed earth or adobe of crude mud, a structure of wood and tile of burned mud, and since they are old constructions many of this type of dwellings are in fair condition.

**Transport Infrastructure:**

The municipalities are connected through the Pan-American highway, and each municipality has paved roads that are in good and fair condition, unpaved but also roadable. The municipalities of Imués and Yacuanquer have primary, secondary and tertiary roads, unlike Tangua which only has tertiary roads.

As for the transport service, Imués, Yacuanquer and Tangua have public services, transit of motorcycles, private vehicles, bicycles and animals.

**Nucleated centers of influence for marketing and access to social services**

Considering the latest development plans of the municipalities, there are no nucleated marketing centers in Yacuanquer and Tangua; on the other hand, Imués has nucleated centers of influence for commercialization like El Pedregal and the township of Santa Ana, localities with greater impact in the activities of tourism and commerce. Due to its geographical location, El Pedregal is in the road corridor between the neighboring countries of Colombia and Ecuador and in the road network for the Pacific coast towards the municipality of Tumaco. On the other hand, Santa Ana is a place of transit towards the municipalities of Guaitarilla, Túquerres, Sapuyes, Ospina, Guachucal, Samaniego, Providencia, Santacruz de Guachavez, Barbacoas among other localities of the department of Nariño.

Therefore, the residents of the urban area and of the municipality of Imués and the localities of El Pedregal, Santa Rosa, Pilcuan and Santa Ana, are mostly merchants, trading goods and services through small stores, supermarkets, stationery stores, restaurants, drugstores, fast food restaurants, hardware shops, clothing and shoe stores, among other types of businesses, generating more industry and trade taxes for the municipal administration.

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Image 5.3.10 Pedregal: Nucleated Center of Influence for Marketing. Planar Coordinates Origin Magna Colombia: E 958178,253 N 607897,85  
Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Media

Each of the three municipalities has a community radio station; the municipality of Imués has "Radio Luz 90.1 FM", which began in the village of Cuarchud Alto (1998), Yacuanquer with "Trigal FM Estéreo dial 107.1" which covers 70% of the population and in the Municipality of Tangua "Impacto Tangua 99.7". The three radio stations have an important reception among the inhabitants and are the main instrument of communication. In terms of entertainment, villagers frequently use television.

#### Facilities

The three major land units (Imués, Yacuanquer and Tangua) have public facilities described below and summarized in annex 5.3.3.a.

#### Municipality of Imués

According to the information of the current development plan of Imues, the municipality has:

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City Hall.

Its facilities were inaugurated in 2010; it is an administrative place par excellence in the municipality, where it houses all the secretaries, the Municipal Council and the Office of the Ombudsman.



Image 5.3.11 Imués Municipal Palace  
Source ([www.imues-narino.gov.co](http://www.imues-narino.gov.co))

Municipal park

The first park of the municipality was the work of Mr. Hernando Sapuyes, there have been permanent renovations in the past administrations, it has the municipal sports center, the monument to Bolivar which was moved next to its original location. In 1996 the construction of the monument to the flags with a design by Mr. Carlos Meza was approved, there is a petroglyph that says "paso el libertador", which was brought from Santa Rosa, the construction of the monument in honor to the Cacique and indigenous governor Carlos Quiscultud Imués is expected in the future and the historical foundation of the Municipality will be institutionalized, at the moment it has a contemporary design.

Cultural Center.

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Located in the corner of Carrera 1ra and Calle 4ta, currently the Public Library, the Municipal Archive, where cultural events are held, the parish uses it as a dance school, and there are permanent trainings by SENA, Corponariño, ESAP and Citizen participation and communal bodies.

#### Market.

Located in the municipal seat, its construction in cement and brick, totally covered, has public bathrooms, laundries, spaces for the sale of fruit, meat, dairy, as well as other miscellaneous products. The functionality of this space is reduced because most of the inhabitants go to the markets of Túquerres, Guitarrilla, Iles and Pasto.

#### Cemetery

Located in the urban perimeter, and managed by the parish.

#### Animal slaughter house

As far as a public slaughterhouse is concerned, the municipality of Imues does not have this type of facility.

Municipality of Yacuanquer

There are the following public spaces as part of the municipal facilities, according to the information provided in the development plan of the municipality.

#### Market

The municipality of Yacuanquer has a market place, located within the urban perimeter, in an area where residences and mixed use premises are located, specifically between the 2nd avenue and 9th and 10th streets. It is managed by the Municipal Administration. There is movement around the market place on Sunday in the morning, this is day on which the inhabitants of the different villages come to sell and / or buy products in the square, it is common to see the presence of sellers from other places, which are located outside the square, invading public space.

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Image 5.3.12 Yacuanquer Market  
 Planar Coordinates Origin Magna Colombia  
 E 615146,660380069 N 964156,11111153  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

### Landfill.

The municipality of Yacuanquer has a site called "micro relleno sanitario", located in the Capulí sector of the village of Mohechiza Bajo about 5 km from the town; at the time it is not working properly, the facilities are in condition of abandonment.

### Cemetery

This facility is located within the urban perimeter, administered by the parish, and provides services to the municipal seat, the different villages of the municipality and some sectors of the municipality of Tangua.

### Municipal Coliseum.

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This high impact facility is of great importance for the municipality, since its structures are designed to provide recreational, sports and cultural services.

At present it is unfinished, according to information of the municipal planning secretary has a 65% degree of progress.

#### Animal slaughter house

In terms of the development plan, the construction of the animal slaughter house is within the projects considered as municipal facility.

#### Municipality of Tangua

According to Tangua's Municipal Development Plan for 2012, there are the following public spaces as part of the municipal facilities:

#### Market

The municipality has a market place managed by the Municipal Administration, located in the 3rd street between 4th and 5th avenues in the municipal seat, this sector has formed a gradual concentration of commercial premises, warehouses, restaurants, cafes, bars and discotheques.

#### Cemetery

Tangua has a cemetery located in the La Paz neighborhood in the municipal seat.

#### Slaughterhouse

Additionally, there is a slaughterhouse in the municipality of Tangua which was constructed favoring the necessary conditions to avoid sanitary and environmental problems.

Finally, we can conclude that the municipalities of Imués, Yacuanquer and Tangua are interconnected by different roads, which facilitates the exchange of products and services.

On the other hand, it is important to note that in the urban sector there is a smaller population settlement, even so, this sector is the most benefited with coverage and quality in the provision of public utilities, including: aqueduct, sewage, toilet, electricity, fixed telephony, mobile telephony, piped gas distribution and social services such as education, health, recreational and sports infrastructure, among others.

All these services are in the urban areas of each municipality, to a greater or lesser extent, however in some places there is a deterioration in physical infrastructure, in materials, equipment and others, this is more evident in social services such as education and health, where support is needed from the municipal administration of each community.

It is generally possible to state that the urban sectors of Imués, Yacuanquer and Tangua are very well organized, however, it is mandatory to further improve the quality and expand coverage to offer a better service so that its inhabitants enjoy a good quality of life.

### Functional Unit 5.1

#### Municipality of Pasto

The table below shows the percentage coverage of public utilities in the municipality of Pasto, in the urban area (U) and in the rural area (R), information obtained from the Pasto 2012-2015 Development Plan:

Table 5.3.16 Public utilities coverage

MUNICIPALITY	AQUEDUCT	SEWAGE	SANITATION	ELECTRICAL POWER	GAS	TELECOM. INTERNET	TRANSPOR
--------------	----------	--------	------------	------------------	-----	-------------------	----------

MUNICIPALITY	AQUEDUCT		SEWAGE		SANITATION		ELECTRICAL POWER		GAS		TELECOM. INTERNET		TRANSPOR	
	U	R	U	R	U	R	U	R	U	R	U	R	U	R
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
PASTO	98.13%	98.0%	95.5%	35%	100%	47%	99.7%	97.7%	30%	0%	90%	70%	100%	60%

Source (Géminis Consultores Ambientales S.A.S, 2016)

## Public Utilities

### Waterworks and Sewage

The aqueduct of the City of Pasto is receiving water from five sources of surface water, Pasto or Buesaquillo River, Quebrada Lope or Puente Tabla, Quebrada Miraflores or Chapal, Embalse Rio Bobo, and Quebrada Mijitayo, distributed in two watersheds; these determine the water supply to supply potable water to the urban sector in 12 communities and in the rural area to 17 townships which are supplied by the Pasto and Bobo Rivers and the Piedras stream. (Pasto A. M., Plan de desarrollo territorial " Pasto educado constructor de Paz" 2016-2019, 2016)

The Sanitary Works of Pasto company, EMPOPASTO S.A. E.S.P. oversees the provision of aqueduct services for the urban area of the municipality, it currently has three treatment plants: Centenario, Mijitayo and San Felipe, which are supplied by the most important water tributaries of the area.

As far as the rural sector is concerned, this service is provided through boards administering private aqueducts and / or water committees, with a coverage of 98%, presenting a total of 130 aqueducts in rural, suburban and private urban land, and 31

additional aqueducts. 80% of the rural population consumes untreated water and 20% minimum disinfection, this due to the lack of infrastructure that meets technical specifications, disinfection and hydraulic designs to provide an adequate service.

According to the above, we conclude that the aqueduct service in the urban and rural areas has a wide coverage, although the quality in the rural sector is low because it does not have adequate water treatment, and in both zones there is evidence of deterioration of the watersheds and micro-watersheds.



Image 5.3.13 Empopasto. Pasto Aqueduct.  
 Planar Coordinates Origin Magna Colombia  
 E 978698,777830444 N 625427,683114108  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

Around the sewer system, Pasto has 95.5% (71,812) of the subscribers. Within the urban area, 13 sectors are identified, of which 49% are subject to surface discharges and 51% to septic tanks. The type of combined sewerage corresponds to 61%, sanitary to 23% and rainfall to 16%. The drainage areas with the largest share of combined sewerage are: Mijitayo left interceptor (municipality 1 and 7), - Americas - Champagnat (municipality 1, 2 and 6), - Chile (municipalities 2, 3, 4 and 5) and northern left interceptor (municipality 9). The previous sectors are the most vulnerable to floods and overflows recorded in the last 5 years, with 2,778 reports of affected households.

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Image 5.3.14 Pasto River waste water discharges  
Source ( Plan de Ordenamiento del recurso hídrico de Pasto)

In the rural sector, there is a 44% coverage equal to 32,399 users that correspond to the beneficiary population in 12 municipal seats of the 17 townships of Pasto, the remaining 56% discharges to latrines, sanitary units, ditches or directly to surface sources. Regarding the infrastructure of this service in the rural sector, it is combined between pipe and concrete, mostly 8 "to 10" having completed its useful life and without having technical specifications or hydraulic designs. (Pasto A. M., 2010 - 2014)

Based on this information, we could say that the coverage of residential sewage collection in the urban sector is relatively high and good, its problem is that there are occasional discharges to River Pasto and Quebrada Chapal. As for the rural sector, it is important to highlight the low coverage of these services, which causes significant health problems.

**Solid waste collection and disposal systems:**

This service is managed by EMAS S.A. E.S.P, and it has a coverage of 100% in the urban area. Disposal is made in the Antanas Sanitary landfill, located at 13 kilometers on the road to Pasto; it also performs collection, sweeping and cleaning of roads. In the rural area this sanitation service is provided in 8 townships, with a coverage of 47%, this

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doesn't include sweeping, which generates pollution in the water sources and the air due to the improper final disposal. (Pasto A. M., Plan de Desarrollo Municipal "Transformacion productiva" , 2012-2015)

Consequently, we may say that although the urban area of the municipality of Pasto has adequate waste management through the EMAS cleaning company, most of the rural areas do not have this service, such as in the case of the Gualmatán townships and the three roads (San José de Catambuco, Vocacional and Huertecillas) that are part of the area of influence of the Pasto, Pedregal-Catambuco sector of the Rumichaca road project - a situation that causes the inhabitants to use the mechanism burning and open-pit disposal, a reality that has significant environmental impact.

Electrical power and telecommunication services: coverage and quality.

The Energy service is provided by Centrales Eléctricas de Nariño S.A. ESP, with a coverage of 99.7% of the Municipal territory. In the municipality, there are 2 hydroelectric plants located in rural areas, with an electricity generation of 23,000 MWh / year. (Pasto A. M., 2010 - 2014)

Consequently, the municipal seat, townships and villages of the municipality of Pasto have electrical energy in their majority; an example of this, is identified through the surveys to the inhabitants of the townships of: Gualmantan, Catambuco and in the villages of: San José de Catambuco, Vocacional, Cubijan, Huertecillas and La Merced, which are part of the area of influence of the road project, we concluded that these sectors have from 96 to 100% coverage of this service.

Pasto has residential gas service in some of the neighborhoods of the urban area covered by Alcanos de Colombia S.A. ESP, whose provider provides services to 16 thousand families; however, the gas service covers the entire municipality giving coverage to 100% of the territory, through distribution and marketing that is performed in cylinders of 33 and 100 LBS covering specific routes; another form of distribution is through stationary tanks located in residential units of apartments. The number of subscribers approximately amounts to 90,000 by 2012, providing 95% propane gas service coverage to households. (Pasto A. M., 2010 - 2014)

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## Public transportation

In Pasto there are several means of transport, which are distributed in strategic areas, where we identified a greater influx of passengers and merchandise. Therefore the Land Use Plan (2014) has classified the means of mobilization into the following:

### Passenger transportation

It refers to the mobilization of people, made up of public transport and private vehicular transport. Public passenger transport comprises modes of travel that are not owned by passengers and can be provided by public companies. Private vehicle transport is the mode related to the displacement of people in private vehicles and who do not provide public service.

### Integrated Public Transport System

It is the set of specialized road infrastructures, equipment, monitoring systems, vehicles, stations and ports, which are designed to mobilize high flows of passengers in a systematic, organized and efficient manner, reducing travel times and providing the population with accessibility to goods and services. The Integrated Public Transport system is structured with the following components:

### The strategic public transport system - SETP

It is made up of the system of routes, stations (yards and workshops, integration terminals, route terminals, stops and traffic light system), vehicles and the collection system for the urban area of the municipality of Pasto. At present SETP is operated by "Unión Temporal Ciudad Sorpresa".

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### Municipal Passenger Transport Terminal

It is the infrastructure that functions as a unit of permanent services, together with the teams, administrative bodies, services to users, transport companies and their automotive fleet, where the authorized or qualified companies that cover routes whose origin, destination or transit are intermunicipal and national, concentrate.

### Mixed Transport Terminal

The function of this infrastructure is to receive all the users coming from the rural sectors to exchange products, and to transport passengers to other municipalities.

### Individual taxi-type public transport of passengers

It is the individual urban and intermunicipal public transport service provided by companies with vehicles with limited capacity of four (4) passengers.

Consequently, based on the above, we concluded that in the municipality of Pasto there is 100% transport coverage, both urban and rural.

The strategic public transport system - SETP covers the mobilization needs of the inhabitants of the townships and some villages of the municipality of Pasto.

We must recognize that the municipality has public transport service through motorcycles, known as mototaxismo, which carries passengers inside the road ring established for the transit of these vehicles; the coverage is more among neighborhoods and in the rural area between villages or townships. The ministry of transport does not authorize this service, however, in the municipality, unions such as Asociación de Moto Trabajadores de Nariño ASOMONAR, Sindicato de Moto trabajadores de la comuna 10 SIMOTCOM10 and Sindicato de Moto trabajadores de Pasto SIMOPAS, have been established.

### Internet access

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In the Urban Sector, the municipality has a wide coverage of fixed telephony, whose networks are distributed by municipality, and regarding mobile telephony, it covers the urban and rural sectors, with the presence of operators MOVISTAR, TIGO, VIRGIN and CLARO in different neighborhoods, municipalities, townships and villages with good quality and coverage. Also, the municipality has internet service, whose coverage is wide and covers the entire urban sector and much of the rural sector, telephone companies offer this service, however, there are also companies that provide cable television services such as: DIRECTV, UNE, Global TV, among others who also offer fixed telephony.

As a conclusion, the graph below shows the discrepancy in the provision of public services in the municipality in the urban and rural sectors, the second being on a lower scale in terms of coverage and quality, reflected mostly in the services of sewerage, sanitation, household gas, telecommunications and internet and transportation; a situation that reduces the quality of life of the inhabitants. The intervention of the municipal and communal administrative boards is necessary to alleviate and end this situation that becomes problematic generating negative effects on the environment and on people.

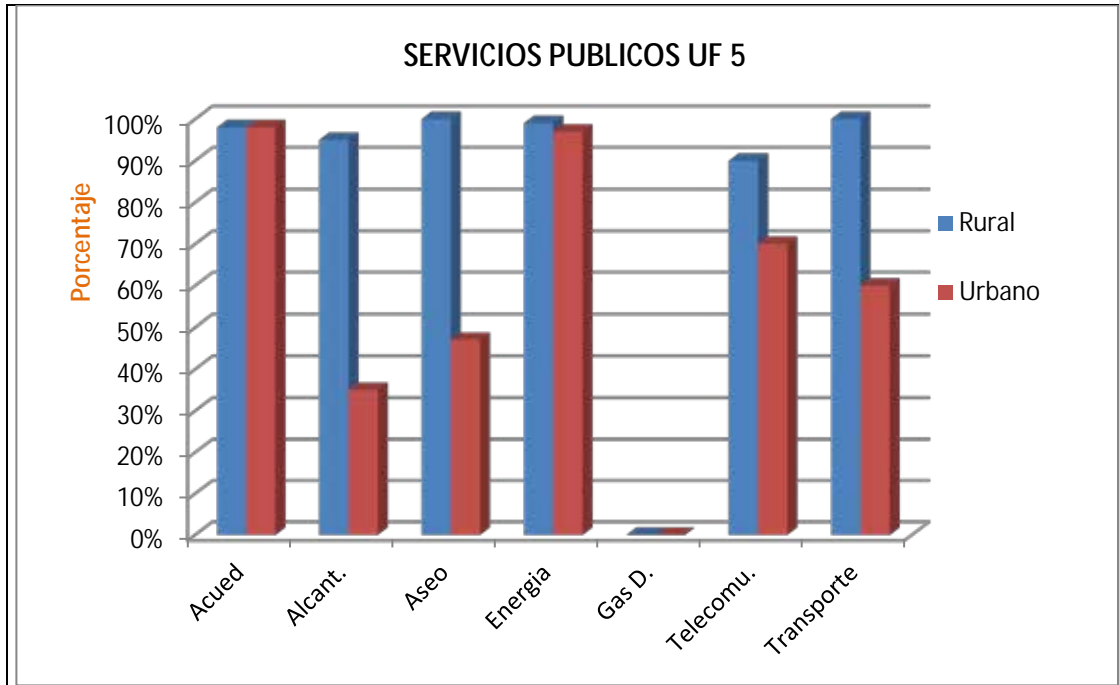


Figure 5.3.47 Summary coverage of public services in FU 5, Urban-rural sector  
Source (Géminis Consultores Ambientales S.A.S, 2016)

### Social Services

#### Academic and Health Infrastructure

Pasto has 50 official educational establishments and 88 private establishments in which a total of 81,203 students are served. All distributed in pre-school education centers, schools and colleges. However, the municipality has a "poor and inadequate infrastructure in some educational institutions, which do not allow to adequately meet the demand for educational services, even more so in rural areas where construction standards are not met, they lack furniture and the pedagogical endowment is limited". (Pasto A. M., Plan de Desarrollo Municipal "Transformacion productiva" , 2012-2015).

In conclusion, educational establishments in the rural area do not have the same technological access opportunities as educational establishments in the urban area, since they do not have interactive technological tools that stimulate and promote the cognitive processes of children. Even so, there is a wide coverage in education, especially in transition and basic elementary, nevertheless it is necessary to improve the infrastructure of educational establishments.

In terms of health services, the city of Pasto holds the departmental reference units of medium complexity, with some high complexity services such as the Departmental University Hospital of Nariño ESE and the CEHANI Child Center, Los Ángeles Child Hospital, San Pedro Hospital, Civil Hospital, with a radius of action covering the 64 municipalities of the department. In the rural area, institutions with extramural care units are classified as low complexity services, which provide outpatient services such as: external consultation: general medical, dental, psychology, emergency, promotion and prevention activities, vaccination, obstetric care: care of child delivery, diagnostic support: clinical laboratory, pharmaceutical service, dental x-ray and basic transport. (Nariño I. D., 2014)

We can therefore confirm that the Municipality of Pasto has a good coverage of the health services, especially in the municipal seat and townships like Catambuco and Gualmatan in the area of influence of project, since the inhabitants have access to first level services offered by health centers.



Image 5.3.15 Pasto Departmental Hospital.  
Planar Coordinates Origin Magna Colombia  
E 978795,580727633 N 625082,349383394  
Source (Géminis Consultores Ambientales S.A.S, 2016)

### Recreational and sports infrastructure

In the urban area of the Municipality of Pasto there are a variety of areas for recreation and adequate leisure of the population, among the recreational and sports infrastructures are:

#### Carnival Square

The Carnival Square is a public space in the center of the city that hosts the Blancos y Negros Carnival, declared by UNESCO as Cultural and Intangible Heritage of Humanity.

This square is a result of urban renewal processes under the government program managed by the mayor of Pasto, Eduardo Alvarado Santander. "A national competition was held with the Colombian Society of Architects for the urban and architectural design, in which the project of architects Mauricio Astorquiza and Diego Ortiz was chosen among those of 40 participants. (Pasto, Ciudad sorpresa de Ensueño, 2016)

#### Playground

The Children's Playground under the administration of Comfamiliar de Nariño offers spaces for the use of leisure, outdoor spaces, sports scenarios, and playgrounds. It also hosts important social and recreational events, sports training schools for children, inter-company recreational services and First Communions, etc. (Nariño C. d., 2016)

#### Parque Chapalito -Comfaventura Recreation and Sports Unit.

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In December of 2011 the operation of amusements and sports began, since then, Comfamiliar de Nariño has spared no efforts and investments tending to improve, strengthen, promote and reactivate the occupation of the park, mainly its attractions. (Nariño C. d., 2016)



Image 5.3.16 Chapalito Recreation Park,  
Planar Coordinates Origin Magna Colombia  
E 491767,534368159 N 13994094,1911982  
Source (Géminis Consultores Ambientales S.A.S, 2016)

Sergio Antonio Ruano Indoor Coliseum

Southeast Neighborhood Indoor Coliseum, used mainly for indoor soccer, basketball and volleyball.

Pastusidad Tercer Milenio Sports Unit

It has a skating rink, cycling and BMX track located on the way to the township of Obonuco. (Pasto, Ciudad sorpresa de Ensueño, 2016).

La Libertad soccer stadium.

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It is the scenario used by the Deportivo Pasto team to play their official matches. It is located on the Pan American Highway, Pasto south exit. It is property of the Department of Nariño and was inaugurated in 1954 under the name of "13 de junio" but three years later in the fall of the dictatorship of General Rojas Pinilla the stadium was renamed "Estadio Libertad." The stadium was remodeled significantly due to the participation of Deportivo Pasto in the Copa Libertadores 2007 with a capacity of 28,400 spectators, approximately. It has natural grass and the size of the field is 120 x 90m. In addition to being the headquarters of the Deportivo Pasto team, it is the main stage in the city for sports and cultural events such as the event on January 3, 'Canto a la Tierra' during the Blancos y Negros Carnival. (Pasto, Ciudad sorpresa de Ensueño, 2016)

### Housing

In the municipality of Pasto, there is a high deficit of housing, due to the imbalance between the construction of new housing and the dynamics in the formation of new homes, in addition to displaced families, either because of violence or the occurrence of natural disasters. In the municipality of Pasto, the housing deficit for 2015 amounted to 16,443 units (16.6%), noting that the greatest deficit occurs in households in strata 1,2 and 3; in terms of the qualitative deficit, land scarcity is the most important obstacle to housing development. (Pasto, Alcaldia municipal, 2016).

The Land Use Plan states that most dwellings in the urban area of the municipality have an adequate infrastructure except for the sectors constituted by old houses that are part of the colonial neighborhoods of the city, which have issues relating to: Deterioration in the walls, total or partial collapse of roof tops, generally consisting of wood framing and clay tile, with broken supports in poor condition due to advanced deterioration of materials. Instability of floors, façades with serious faults, humidity, cracks in adobe, rammed earth walls.

Likewise, the referenced document describes that housing in the rural sector has deficiencies in its infrastructure, however, some programs have been designed to support the rural sector in housing, but this coverage needs to be expanded, since the soils have been denominated as farming land and they are investing more in this area, leaving rural housing aside.

### Transport Infrastructure:

The urban area of the municipality of Pasto has improved its road network based on the municipal infrastructure projects, as it has: pedestrian and vehicular bridges, platforms and vehicular routes that are being improved.

Pasto is connected by the Pan American Highway, and there are primary, secondary and tertiary roads, both paved and unpaved but roadable. Therefore, the quality of the transport infrastructure service is good at the rural and urban level, by allowing the transit of the public service, motorcycles, private vehicles, bicycles, cattle and pedestrians.

### Nucleated centers of influence for marketing and access to social services

Catambuco is considered one of the most influential for commercialization within the municipality, as it is a nucleated center of the municipality of Pasto, which is located at the threshold of the Pan-American highway; producers and entrepreneurs of the region, have taken advantage of its location for the installation of industries such as: Andinos, Corporación Cafetera de Nariño, Bakery, Soy Processing Industry, Bavaria, among others.

Likewise, the township is characterized by its economic activity in the tertiary sector, based on the typical food cuisine of the department of Nariño as the main source of local resources.



Image 5.3.17 Bavaria, Planar Coordinates Origin Magna Colombia  
 E 974685,624950562 N 619316,47777164  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

### Media

The municipality of Pasto has the following means of communication:

#### TV

The municipality receives the transmission of five (5) National channels, it also has satellite cable service offered by different companies, such as: Telefónica Movistar, Claro, DIRECTV, Global Tv, among others.

#### Radio

The municipality of Pasto has different stations in charge of providing entertainment and information to 100% of both urban and rural population, among them are: Tropicana, Radio Uno, Universidad de Nariño, La Cariñosa, Ecos de Pasto, Radio Viva, Caracol Radio and Blu Radio, Romántica Stereo and Oxígeno.

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## Press

The municipality of Pasto has the regional journal "DIARIO DEL SUR" and "EL EXTRA", in addition to this, the inhabitants have the possibility to easily access and purchase national newspapers such as: " EL ESPECTADOR", "EL TIEMPO", " EL PAIS", among others.

## Facilities

At present, the municipality of Pasto is undergoing a horizon of disarticulation in the system of facilities present in the territory. If we consider its location, we find that they are concentrated in specific sectors such as the center and north of the city, creating disconnection among them and areas with greater population density, generating the need in the population of these sectors to move about a road infrastructure that is not very efficient.

The public sector shows a low capacity to cover the population of the municipality, both in collective and basic facilities, leaving behind large areas where large numbers of inhabitants are concentrated. The implementation of facilities has been generated in a disorderly way without considering strategic planning, nor important parameters such as the needs of the population to be served, ignoring the qualitative conditions of the services to be provided.

"In terms of high impact facilities, Pasto either does not have them or the existing infrastructure is obsolete, as is the case with market places, which are not conditioned, nor built, nor located adequately and according to the requirements and demands of a globalized world. " (Pasto A. M., Plan de Desarrollo Municipal "Transformacion productiva" , 2012-2015)

Among the most representative public spaces for the municipality of Pasto are the following: (See also table annexes 5.3.3. A, summary of social services for Functional Unit 5.1)

## Cemetery Park

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### Jardines De Las Mercedes S.A.

This entity has been legally incorporated before the Chamber of Commerce of Pasto through commercial registration number 3792-4 and before the National Tax and Customs Office, DIAN, legalized and identified with Tax ID (NIT) number 891200807-8. JARDINES DE LAS MERCEDES S.A. was created as a private law company, 35 years ago.

### Others:

Jardines Cristo rey  
Central Cemetery



Image 5.3.18 Cementerio Jardines Cristo Rey, Planar Coordinates Origin Magna Colombia E 977883,871240545 N 622682,313397566  
Source (Géminis Consultores Ambientales S.A.S, 2016)

### Imperial Theater

The construction of this jewel of republican art is thanks to Don Rafael Villota Chaves, an entrepreneur of the early twentieth century, who worried about culture and

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especially for cinema; he proposed to create a place for the free leisure of the inhabitants of Pasto.

#### Museums

(Pasto, Pasto Ciudad Sorpresa, 2016)

#### Museo Casona Taminango

Address: Calle 13 N° 27 – 67

This mansion in colonial style dating back to 1623, is an architectural relic declared a National Monument by Decree No. 2000 of 1971, and converted into the Museum of Arts and Traditions of the Nariñense Culture, on July 14, 1989. It is important to note that this mansion was a silent witness to the occupation of women who were sometimes moved for maternity reasons, or by spouses or lovers.

#### Museo Madre Caridad Brader

Cll.18 Cra.32a-01/Maridiaz

Since 1935 Mother Caridad Brader collected objects, works and furnishings, which have been well managed by the Franciscan Sisters of Mary Immaculate. It consists of 9 sections: Mother Caridad Brader, Ethnographic Archeology, Bibliography, Folklore, Mineralogy, Botany, Zoology and Fine Arts.

#### Museo del Carnaval

Address: Calle 19 Cra 42 - Pandiaco Cultural Center - Municipal Culture Secretariat

Inaugurated on December 20, 2000, it is a permanent exhibition space of folk art expressed in the Blancos y Negros Carnival. It consists of 2 sections: Prehispanic (Documentation of the reason for the carnival with indigenous references and photographic reading in sepia in contrast with the present ones) and Artistic Carnival (Dolls and pieces of the event)

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Museo del Oro - Banco de la República  
Calle 19 Cra 21 - 27 Centro Cultural Leopoldo López Álvarez

It is the responsibility of Pasto's Central Bank to custody the ancestral artistic heritage piece, bequeathed by the families who inhabited this southwestern region of the country. At the Leopoldo López Álvarez Cultural Center, under to the Issuing Bank.

The museum was inaugurated in 1984 and the 432 pieces are distributed with extreme security in three didactically illustrated rooms to facilitate their understanding. We can find works of goldsmiths worked by the Piartal culture, ceramics, lithic pieces of wood, in shell and fabrics with vegetable fibers, corresponding to the Tusa and Capulí cultures.

In addition to the permanent exhibit, the administration offers, among others, the services of: guided tours, meeting with teachers and families, training and information workshops and nine didactic cases containing replicas of the indigenous cultures of Colombia (Nariño, Sinú, Calima, Tayrona, Amazonas, among others), such as rollers, nose rings, spinning disks, ceramic fragments and handicrafts made by indigenous people from the Amazon region; these are made available to schools that wish to stimulate the dissemination of knowledge about our ancestral roots.

Museo Juan Lorenzo Lucero  
Address: Calle 18 N° 28 - 27

With the purpose of immortalizing the name of one of the most outstanding "pastusos" (name given to the inhabitants of Nariño), Monsignor Juan Lorenzo Lucero, priest Jaime Álvarez, Jesuit from Antioquia, founded the Monseñor Juan Lorenzo Lucero Museum in Pasto on December 11th of 1974 also known as "The Temple of Pastuso History".

Market

Plaza de mercado Potrerillo

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Potrерillo Market Square is next to Las Lunas neighborhood and it is the largest plaza in the city of Pasto located on Carrera 7A # 16A-2.

Other market places are:

El Lorenzo, located on Carrera 1C # 18A-1 to 18A-99 and Los Puentes located on Carrera 24 # 22-48

Family baskets of products harvested by farmer hands from different municipalities close to the city are supplied in this market, these collection centers have a variety of legumes, fruits, vegetables, meats, flowers and ornamental plants, various kinds of domestic animals and other food and grocery stores.

Animal slaughter house:

Pasto has a municipal slaughterhouse located in the village of Jongovito, 5 kilometers from the city, which was built about 40 years ago.

By way of conclusion, we may state that Pasto, known as the surprise city of Colombia, is the second largest city in the Pacific region after Cali. The total population of the municipality (urban and rural) estimated for 2015 according to data from DANE is 550,000 inhabitants.

This is one of the best organized municipalities in terms of control and monitoring of the provision of public home utilities, since it has the Center for Citizen Attention and Advice in SPD (CAC), and with its Attention of Super Services points "PAS" in the city of Pasto, who recently offered a day of training for officials and servers on counseling and socialization on issues related to user attention and due process in claiming formalities.

The coverage and quality in the provision of public and social services in the urban sector is good; energy, aqueduct, sanitation, telecommunications and internet and transport, are provided by recognized companies whose material and infrastructure are subject to continuous maintenance to provide an optimal service to users; the municipality also has adequate spaces that facilitate their transmission.

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In terms of social services, Pasto has a varied educational infrastructure, both public and private, for all sectors of the population. The health sector has the best health centers and hospitals duly monitored by the departmental health institute who oversees its effectiveness and quality.

The recreational and sports sector is large and enjoys a good infrastructure, mostly by COMFAMILIAR DE NARIÑO, in terms of roads, they have been subjected to repairs and new openings, which means that there is a better mobility.

### 5.3.3.2 Minor land units

#### Functional Unit 4

The information contained herein was obtained through the application of village data sheets with inhabitants from the region.

#### Municipality of Imués

#### Pilcuán and El Pedregal villages

The following Table 5.3.25 shows the coverage of public utilities for the minor land units of Pilcuán and Pedregal. The percentages correspond to those reported in the village data sheet.

Table 5.3.17 Public utilities coverage

VILLAGE	AQUEDUCT	SEWAGE	SANITATION	ELECTRICAL POWER	GAS RESIDENTIAL	TELECOM. INTERNET	TRANSPORT
	%	%	%	%	%	%	%
Pilcuán	100%	68%	100%	100%	0%	30%	100%

El Pedregal	100%	100%	100%	100%	0%	90%	100%
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Source: Village Data Sheet (Géminis Consultores Ambientales, S.A.S. 2016)

### Public Utilities

#### Waterworks and Sewage

Pilcuán has an aqueduct service, the water sources that supply it are Simana, Salado and a water spring; part of the population is supplied with water that has passed through a sand trap and has been treated for its consumption. As for availability, the service is intermittent and the average cost of this service is \$ 3000.

El Pedregal is supplied with this liquid through a village aqueduct, with a 100% coverage of the population. The water source for the aqueduct is the Ojo de Agua, Telles River, the Guapuscal spring, whose source is in Yacuanquer and Funes. There is a tank, a network of PVC pipes, and hoses that are in good condition for the supply of this service. Although it does not have a treatment plant, we consider that this resource is suitable for human consumption because of continuous treatment. As for quality, the aqueduct service may provide permanent supply, with a regularly high water pressure and the average of the low monthly cost is of \$ 4,000 pesos.



Image 5.3.19 El Pedregal Aqueduct,  
Planar Coordinates Origin Magna Colombia

E 958041,062 N 608231,564

Source (Géminis Consultores Ambientales S.A.S, 2016)

There is also the sewer service in the entire village with a 100% coverage.



Image 5.3.20 El Pedregal Sewer,

Planar Coordinates Origin Magna Colombia

E 955399.198 N 603183.595

Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Solid waste collection and disposal systems

The municipality is in charge of the garbage collection of the two minor land units, through Company ASOASPIN-IMUÉS, whose final disposal of waste is disposed in the Sanitary Landfill of Antanas, located in the municipality of Pasto.

#### Energy and telecommunications

The service has a 100% coverage in the two minor land units, provided by Centrales Eléctricas de Nariño CEDENAR Túquerres. The quality of the service is good since it is permanent, with high voltage and low monthly rates.

#### Residential gas service

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The two minor land units do not have residential gas services, however, its inhabitants access this service by means of the distribution and commercialization of gas pipettes which are used for cooking food. Montagas is the company providing this service.

### Public transportation

Pilcuán has operational roads that communicate the inhabitants with the rest of the municipality; paved roads are in good condition and unpaved roads are in fair condition.

In Pilcuán and El Pedregal there is public service transportation, private cars, public and private motorcycles and bicycles. The value of transportation is \$ 3,000 pesos per person and an average trip of \$ 15,000 pesos.

As for mobility, the main access that leads to the village of Pilcuán, is not in the area of intervention of the Rumichaca - Pasto Road Project. This is the reason why no mobility study was carried out.

### Internet access

There is no internet access in the minor land unit of Pilcuán.

The inhabitants of Pedregal have the mobile phone service provided mainly by Movistar, there are also 3 points of telephone booths and Internet, for commercial use for the inhabitants who need it.

### Social Services

### Academic and Health Infrastructure

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The village of Pilcuán has an educational infrastructure, offering preschool and primary services; in the specific case of the Pilcuán Viejo sector there is service until the eighth year of high school under the academic modality. Centro Educativo Pilcuán La Recta has 11 students enrolled and the Centro Educativo Pilcuán Viejo has 65 students enrolled.

As for other services, the institutions have a school restaurant: In Pilcuán Viejo they provide lunch and Pilcuán La Recta, snacks; they do not have transport, which is why students go to the school by foot.



Image 5.3.21 Pilcuán La Recta sector, Centro Educativo Pilcuán, Imués  
Planar Coordinates Origin Magna Colombia West E 956683.037 N 605413.892  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.22 Institución Educativa Pilcuán Viejo  
 Planar Coordinates Origin Magna Colombia West E 955384.833 N 604931.825  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

Students from El Pedregal attend I.E. Jesús Del Gran Poder located in the town center, where they provide the services of preschool, elementary and high school in the academic and technical gastronomy modalities in agreement with SENA. Currently the institution has 412 students. As for other services, we identified that the establishment that has a school restaurant in which they deliver breakfast, and even with the transportation service available, some of the students go to school by foot, bike or motorcycle. In terms of its physical infrastructure, it is considered to be in good condition.



Image 5.3.23 Institución Educativa Jesús del gran Poder,  
 Planar Coordinates Origin Magna Colombia  
 E 958174,951 N 608162,326  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

Pilcuán Viejo has a health center, and its health system is covered by the subsidized and contributory system, where the highest number of users is registered with EPS Emssanar, Confamiliar and Mallamas. However, the inhabitants also resort to traditional medicine, relying on healers from the same region.

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Image 5.3.24 Centro de Salud Pilcuán, Pilcuán Viejo sector  
 Planar Coordinates Origin Magna Colombia West E 955988.777 N 604971.558  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

El Pedregal is the smallest land unit that has a health post which provides first level or outpatient services, its infrastructure is in good condition. The coverage in health is by the subsidized and contributory regime and the EPS with greater number of users are Emsanar, Confamiliar and Café Salud.

The community also relies on the knowledge of traditional medicine, with the presence of healers in the area, which the community consult with total confidence.



Image 5.3.25 El Pedregal Health Center, Planar Coordinates, Origin Magna Colombia  
 E 958199,864 N 608004,088  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Recreational and sports infrastructure

Pilcuán has a sports center in good condition for recreation and sport activities of its inhabitants; it is in the sector of Pilcuán La Recta.

In El Pedregal, there is a soccer field and a sports center, in good conditions, there are also bathing resorts suitable for the healthy recreation of its inhabitants.



Image 5.3.26 Polideportivo El Pedregal,  
Planar Coordinates Origin Magna Colombia  
E 958230,599 N 608128,704  
Source (Géminis Consultores Ambientales S.A.S, 2016)

### Housing

In Pilcuán the approximate number of houses is 520, most of which are in good condition, the predominant materials are brick walls, floors in tile, cement and wood, while the roofs are mainly built in tiles of eternit and concrete slabs.

In the Pedregal the approximate number of houses is 600 with an average of 1 family per home. Regarding its infrastructure, we can mention that the constructions identified in El Pedregal village have walls made of brick and rammed earth, the floors are in tile and cement; and the ceilings in asbestos cement and slabs in concrete. Given that the applied data sheet asks about the condition of most dwellings in the village, they are regarded highly by the community.

### Transport Infrastructure:

Pilcuán has three routes that communicate with the rest of the municipality, primary and secondary type roads. In addition to these, sector Pilcuán La Recta has trails to

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transit, paved roads are in good condition, while unpaved roads in fair condition, making it difficult for the transit of vehicles and pedestrians especially when it rains. In El Pedregal, 3 primary roads were recognized, which provide connectivity and communication with the rest of the municipality. The roads are paved, but in fair condition, however, there is transit of vehicles of all kinds.

In terms of mobility, since El Pedregal is located on the Pan American highway, the Pedregal - Catambuco sector of the Rumichaca - Pasto road project, is characterized by the high traffic flow of all kinds of pedestrians, vehicles, motorcycles and livestock. This has an impact on the socioeconomic and cultural environment of the population, having an influence on the commercial sector, the number of establishments available to serve the population, as well as becoming a strategic point of mobility and cultural exchange for the number of people from regional, national and international origin that passes by the zone.



Image 5.3.27 Pedregal  
 Planar Coordinates Origin Magna Colombia  
 E 958410,560398698 N 607995,216693413  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

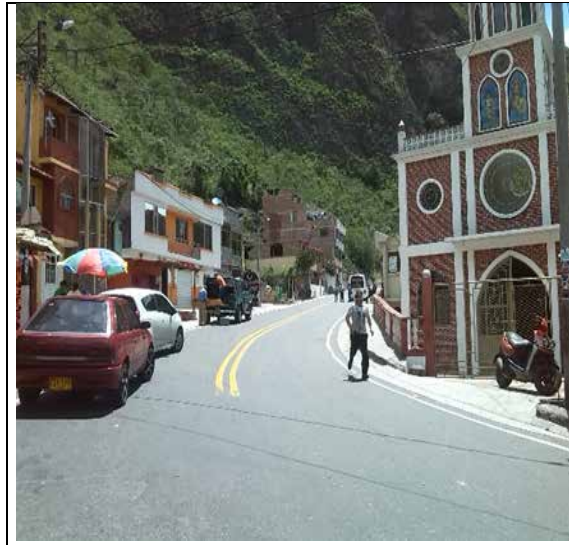


Image 5.3.28 Access to Tumaco- Pedregal-Municipality of Imués  
 Planar Coordinates Origin Magna Colombia  
 N 607897,85 E 958178,253  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

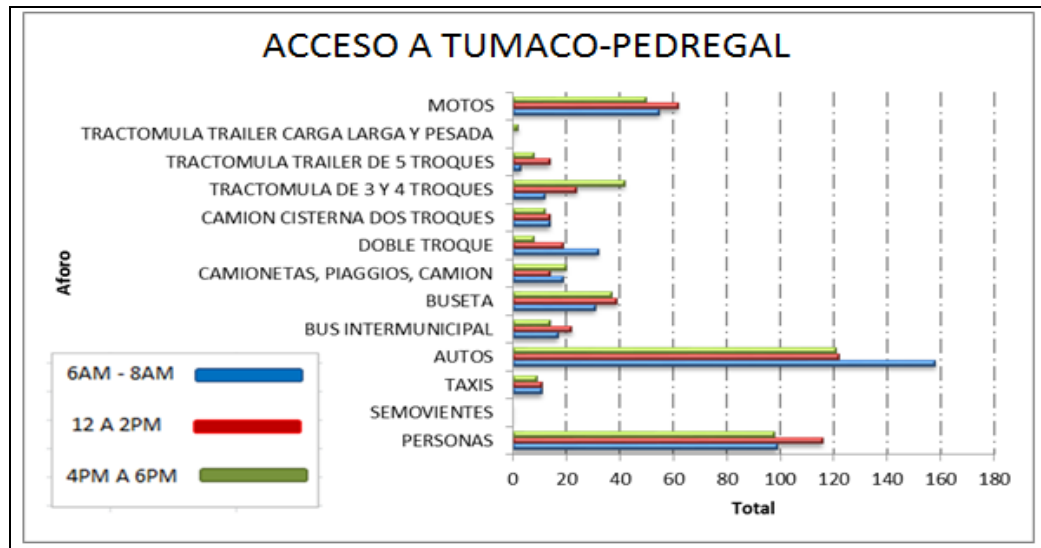


Figure 5.3.48 Capacity access to Tumaco-Pedregal -26 April 2016  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



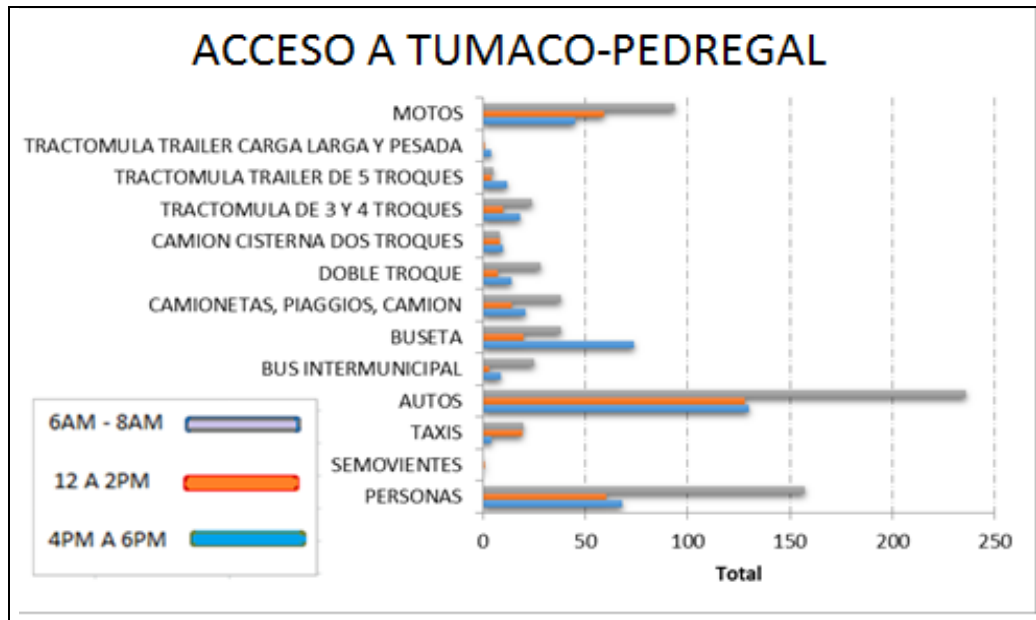


Figure 5.3.49 Capacity access to Tumaco-Pedregal - May 15 2016  
Source (Géminis Consultores Ambientales S.A.S, 2016)

It is also important to mention that the access that leads to the municipalities of Túquerres, Sapuyes, Yacuanquer, Mallama and Tumaco in the Department of Nariño is in El Pedregal, where there is extensive vehicular and pedestrian traffic.

This access is a primary road in suitable road condition, where there is a greater flow of cars according to the two-day traffic, continuing with that of pedestrians in the three times of measurement (6 to 8 am, 12 to 2 pm and 4-6 pm). In third place, you may find motorcycles that transit in an average of 50 to 90 per measurement moment. Fourthly, is the mobility of small buses the two days, although during Sunday the transit of this type of vehicles is greater reaching up to 80 small buses in the schedule from 4 to 6 pm. In fifth place were heavy duty trucks on April 26th, a reality that is different to the one identified on Sunday, May 15, in which in the fifth place was the transit of piaggios, vans and mini trucks.

Finally, for the two days of measurement, the traffic of trucks, semi-trucks and intermunicipal buses have a lower index.

### Community Facilities

Pilcuán has a communal stand in its two sectors that is in fair condition, and a chapel that has its infrastructure in good condition. These spaces are for community service, where the inhabitants attend religious, cultural or social activities.



Image 5.3.29 Capilla Pilcuán, Pilcuán La Recta sector, Imués  
 Planar Coordinates Origin Magna Colombia West E 956658.104 N 605406.818  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

There is a chapel in good condition in El Pedregal, which is located on the left side of the Pan - American Highway, this is part of the community facilities of the Pedregal - Catambuco sector of the Rumichaca - Pasto road corridor; we also identified the image of the Virgin of Carmen, that is on the left side of the Pan American highway.



Image 5.3.30 Image of Virgen del Carmen, El Pedregal - Municipality of Imués.  
 Planar Coordinates Origin Magna Colombia  
 E 958467,1046 N 608012,9023  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

Finally, we would like to highlight that El Pedregal is one of the most outstanding nucleated centers of the municipality of Imués, given that trade is predominant in this sector, as it is a rather busy passage for travelers to Ipiales and Ecuador, so this sector is greatly benefited in terms of coverage and quality of public utilities such as energy, aqueduct, sewage, etc.

It should be noted that, although the aqueduct is for the village, it is very well organized by the local management boards and supplies 100% of its inhabitants, the rest of services are also covered in their entirety, the location of Pedregal facilitates and benefits its inhabitants in the provision of all services, which contributes to improve their quality of life. The only weakness, as in most of the municipalities of Nariño, is coverage in terms of the provision of household gas, which has not yet been implemented throughout Nariño, only in some sectors of the municipality of Pasto.

Regarding the provision of social services, it can be said that it also has good coverage, since it has all the necessary infrastructure to meet the needs of the resident and visiting population; there are educational institutions, a health center that provides first

level assistance, passable roads, community facilities, spaces for recreation and leisure, etc. This implies recognizing that this is one of the municipalities with the greatest coverage and quality in terms of the provision of services.

#### Municipality of Yacuanquer

#### Inantas Bajo and Alto Villages

The following Table 5.3.26 shows the coverage of public services for the minor land units of Inantas Bajo and Inantas Alto. The percentages correspond to those reported in the village data sheet. Additionally, we asked about the characteristics of the services, such as transport, where we required to rate the service: high cost, low coverage, low frequency, none of the above or other.

Table 5.3.18 Public Utilities Coverage in the minor land units of Yacuanquer

VILLAGE	AQUEDUCT	SEWAGE	SANITATION	ENERGY	RESIDENTIAL GAS	TELECOM. AND INTERNET	TRANSPORT
	%	%	%	%	%	%	%
Inantas Bajo	100%	0%	0%	100%	0%	60%	100%
Inantas Alto	100%	0%	0%	100%	0%	60%	100%

Source: Village Data Sheet (Géminis Consultores Ambientales S.A.S, 2016)

#### Public Utilities

#### Waterworks and Sewage

The two villages have village aqueduct services, while Inantas Bajo is supplied with a waterhole source, coming from the municipality's urban center, while Inantas Alto is supplied by a stream from the village of San Felipe in Yacuanquer, the water supply is daily, with 100% coverage. They do not have a treatment plant, nor a sand trap; supply

is through a tank, connected to a network of PVC pipes and hoses, which makes the quality of this service fair. Studies have been carried out and it has been possible to verify that the liquid is suitable for human consumption.

Table 5.3.19 Distribution of village water sources in the Municipality of Yacuanquer

Village	Water Source	Location	Coordinates
Inantas Bajo	Waterhole spring	Yacuanquer	E: 963927,664 N: 615621,833
Inantas Alto	Stream	Municipality Yacuanquer, San Felipe Village	E: 963927,664 N: 615621,833

Source (Géminis Consultores Ambientales S.A.S, 2016)

There is no sewer service for either of the two villages, instead, septic tanks are used for the disposal of faecal matter.

#### Solid waste collection and disposal systems

There is no waste collection service in either of the two villages, solid waste management is carried out through burying and burning.

#### Electrical power and telecommunication services: coverage and quality.

The service has a 100% coverage, provided by Centrales Eléctricas.

It should be noted that in Inantas Bajo and Inantas Alto there is no gas service, however, this service is covered by the distribution of pipettes for home use. Firewood is also used to cook food.

#### Public transportation

The village has public service transportation, private cars, public and private motorcycles, animals and bicycles. The value of transportation is \$ 10,000 pesos per person and an average trip is of \$ 20,000 pesos.

#### Internet access

The village does not have fixed telephony services, but has a mobile phone service provided mainly by operators Claro, Movistar.

#### Social Services

##### Academic and Health Infrastructure

The two villages have educational centers, i.e. Centro Educativo Inantas Bajo in the Ojo de Agua sector with a school-age population of 36 and Centro Educativo Inantas Alto with 14 students; Both establishments offer pre-school and primary services in the academic modality. They have the school restaurant service, in Inantas Bajo they deliver breakfasts, in Inantas Alto lunches; they do not have transportation, so the students go to the school by foot or motorcycle. The physical facilities are considered to be in good condition.

In terms of health, the inhabitants of the two villages have health services, but they do not have a health post in their village, so in case of need, they go to the centers of Yacuanquer and Tangua. However, the people in each sector show an interest and reliability for traditional medicine, recognizing the presence of healers, and midwives among other traditional treatments in the Inantas villages.

##### Recreational and sports infrastructure

In Inantas Bajo there are places for recreation and sports, such as a soccer field and a sports center, whose infrastructure is in good condition. Unlike Inantas Bajo, where there is no space for recreation and sports.

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## Housing

The total number of houses in Inantas Bajo is 80 in good condition, and in Inantas Alto 30 in good condition. The constructions identified in the two villages have brick walls and rammed earth walls, the floors are in tile, cement and earth; the ceilings in asbestos cement and zinc roof tiles, clay tiles and concrete slabs.

## Transport Infrastructure:

Three roads were recognized in Inantas Bajo, divided into primary and secondary, two of which are paved and in good condition and one unpaved and in fair condition. Inantas Alto has two roads, a primary and a secondary road, the first paved and in good condition, and the second unpaved and in fair condition. The roads of each village serve to communicate its inhabitants with the rest of the municipality, it should be noted that all roads are passable and all kinds of vehicles may transit through them.

The main access that communicates to the Inantas Bajo and Inantas Alto villages is a tertiary road in fair condition, in which according to the mobility measures carried out on Tuesday, April 26 and Sunday, May 15 of this year, we identified that the highest flow of mobility in the two days is of pedestrians, followed by motorcycles in the three schedules (6 to 8 am, 12 to 2 pm and 4 to 6 pm). On Tuesday 26th, trucks, vans and piaggios occupy the third place. As for the flow of mobility unlike Sunday on which the third place is occupied by cars, which means that from Monday to Friday there are more heavy duty vehicles and there are more cars entering during the weekends. Finally, for the two days of measurements there was a minimum transit of semi-trucks corresponding to less than five per day.

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Image 5.3.31 Access to Inantas Bajo and Inantas Alto - Municipality of Yacuanquer  
 Coordinates: E 960700 N 608559  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

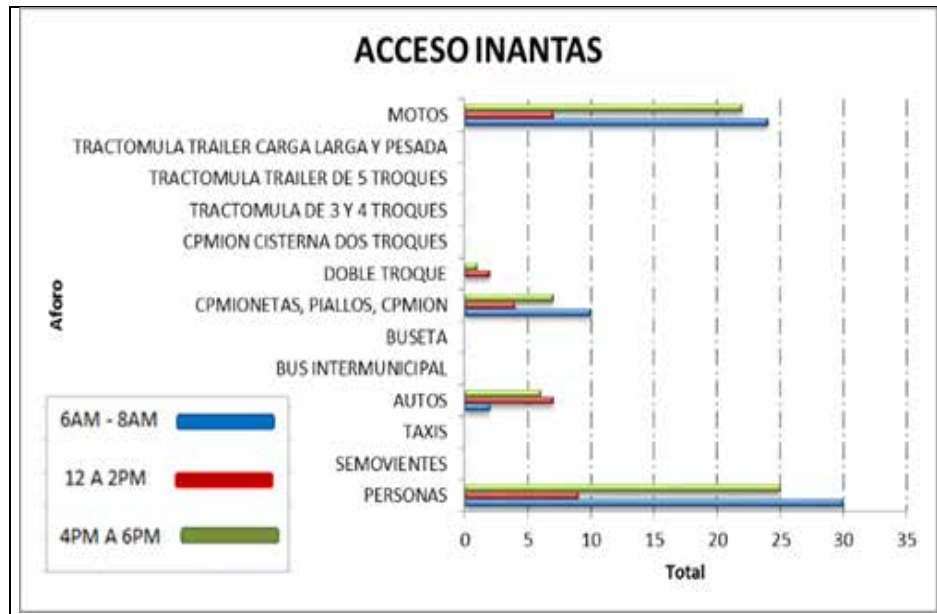


Figure 5.3.50 Reference chart from April 26  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



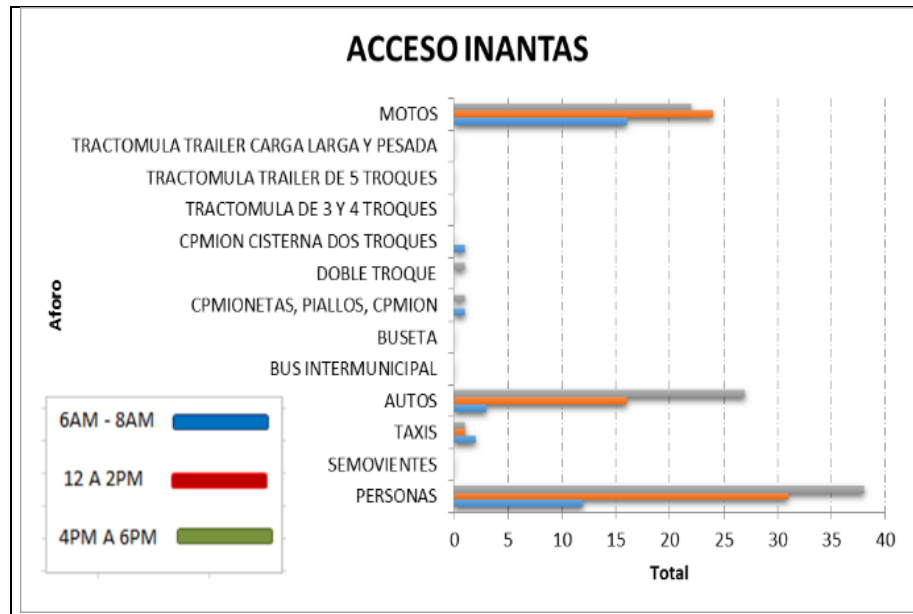


Figure 5.3.51 Reference chart from May 15  
Source (Géminis Consultores Ambientales S.A.S, 2016)

See table appendices 5.3.3.c, Access Mobility measurement, Functional Unit 4 and 5

### Community Facilities

The village of Inantas Bajo has two chapels and a communal house with an infrastructure in good condition, Inantas Alto does not have community facilities.

See Annex 5.3.3d talking maps

By way of conclusion, we emphasize that there is great need in both land units to have the necessary conditions for the provision of public services such as sanitation and sewage; these two sectors do not have this service therefore they use septic tanks as a means of faecal matter disposal, and for disposal of waste burying and burning. This situation is of concern to the inhabitants of these two villages, as these practices are likely to collapse and generate a severe health emergency, putting the quality of life of its inhabitants at risk.

Regarding the provision of social services, there is a deficiency in infrastructure for the health sector, since no one has this service in the village, they must go to the municipal seat of Yacuanquer or centers of the surrounding municipalities in case of any emergency. However, the inhabitants make use of traditional medicine, somehow compensating for the scarce health service options, either by necessity or by cultural custom.

It should be noted that in Inantas Alto there are fewer inhabitants than in Inantas Bajo, this allows for a more neglect municipal administration and of its own inhabitants in terms of the organization and adequacy of services. The first village was separated from the second upon the location of the school.

#### Municipality of Tangua

#### Suburban Tangua: Bolívar, Fátima and Corazón de Jesús Neighborhoods

The following Table 5.3.28 shows the coverage of public services for the minor land units of the suburban sector of Tangua. The percentages correspond to those reported in the village data sheet. Additionally, we asked about the characteristics of the services, such as transport, where we required the following type of information to rate the service: high cost, low coverage, low frequency, none of the above or other.

Table 5.3.20 Coverage of public utilities in the neighborhoods of Tangua

NEIGHBORHOOD	AQUEDUCT	SEWAGE	SANITATION	ENERGY	RESIDENTIAL GAS	TELECOM. AND INTERNET	AND TRANSP
	%	%	%	%	%	%	%
Bolivar	50%	100%	100%	100 %	0%	60%	100 %
Fátima	50%	100 %	100%	100%	0%	60%	100%
Corazón de Jesús	50%	100%	100%	100 %	0%	60%	100 %

Source: Village Data Sheet (Géminis Consultores Ambientales S.A.S, 2016)

## Public Utilities

### Waterworks and Sewage

The three districts have a water source that comes from Arroyo Yacuanquer, located in the municipality with the same name. We considered that this liquid is not suitable for human consumption, there is no treatment plant, no sand trap, water is turbid in color, the piping network is in poor condition, there is no network of hoses, and only one tank.

The inhabitants use the aqueduct network that passes by the border of the Pan American Highway for the provision of this service, however, it does not have good coverage since the supply is not permanent.



Image 5.3.32 Bolívar Neighborhood Aqueduct,  
Planar Coordinates Origin Magna Colombia  
E 965065,774 N 613104,880  
Source (Géminis Consultores Ambientales S.A.S, 2016)

The sewerage service in Bolivar, Fatima and Corazón de Jesús neighborhoods has a 100% coverage.

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Image 5.3.33 Bolivar Neighborhood Sewerage,  
Planar Coordinates Origin Magna Colombia  
E 964957,662 N 612734,350  
Source (Géminis Consultores Ambientales)

#### Solid waste collection and disposal systems

EMAS is the entity in charge of the collection and final disposal of waste in the three districts, which it takes to the sanitary landfill of Antanas (Pasto); collection is done weekly, and the municipality is in charge of allowing this service to be met.

#### Energy and telecommunications service

We can say that the three neighborhoods are provided with electric power service, supplied by CEDENAR, whose quality is good and coverage is 100%.

It is necessary to emphasize that none of the three neighborhoods has this service but if they use it, they do so through the purchase of gas pipettes, supplied by Montagas and Energas, for residential use.

#### Public transportation

They have this service and the average cost per transportation is \$ 1000.

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### Internet access

The communities in these three neighborhoods do not have the fixed telephony service, however this is supplemented by the mobile telephony provided by the operators Movistar, Claro and Tigo with a minimal coverage, internet service is not present in any of the areas.

### Social Services

#### Academic and Health Infrastructure

Students from the neighborhoods attend the Misael Pastrana Borrero educational institution located in the Bolivar neighborhood, with 734 students. The institution has good conditions in terms of its physical facilities, where the services of preschool, elementary, high school are provided. The establishment has a school restaurant service and transportation, although there are students who walk to go to school.

There is no health post located in each neighborhood or in any of them, so if necessary, the inhabitants go to the ESE Tangua, located in the center of the municipal seat. Health coverage is by a subsidized regime, being Emssanar and Comfamiliar the EPS with greater number of users. Even so, inhabitants resort to traditional medicine, with the presence of healers in the sectors of Bolivar and Corazón de Jesús.

#### Recreational and sports infrastructure

The Bolivar neighborhood has a sports center with an infrastructure that is in a fair condition. Fatima and Corazón de Jesus do not have sports or recreational infrastructures.

### Housing

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The total number of houses in the three neighborhoods is 298 in fair condition, the average is 1 family per dwelling. The constructions are characterized by walls of brick and adobe, the floors are in tile, wood and cement; roofs made of asbestos cement, zinc tile, clay tile and concrete slab.

### Transport Infrastructure

Fatima neighborhood is the only one that has a paved road, for Bolivar and Corazón de Jesus roads are unpaved, even though these roads are roadable with transiting public service vehicles, private vehicles, motorcycles, bicycles and livestock.

### Community Facilities

None of the three neighborhoods has a Community Infrastructure. It should be noted that each neighborhood has a grotto with a religious type image; in Bolivar the grotto of the Divine Child, in Fatima the grotto of the Virgin and in the Corazón de Jesus neighborhood a grotto with the same name.

By way of conclusion, we emphasize that these neighborhoods belong to the suburban sector of Tangua, with good coverage and quality in the provision of some public utilities, with the exception of the aqueduct, because this resource is provided in a very fair way in these sectors, since the water daily supply is not suitable for human consumption, so its inhabitants must make use of the aqueduct network from the Pan American Highway with an inconstant supply, a situation that puts the inhabitants of these sectors at a disadvantage compared to others, because access to potable water is a pressing need in daily life.

In terms of social services, they have adequate infrastructure for the health sector, recreation, education, among others, not necessarily located in the same neighborhoods, but close to them or in the municipal seat, these services are provided with good coverage and quality for all users.

See Annex Table 5.3.3.b, Social Infrastructure Minor LUs.

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### Villages of Tangua

The following table shows the coverage of public utilities for the minor land units of the municipality of Tangua. The percentages correspond to those reported in the village data sheet tab. There is also information on characteristics of the services.

Table 5.3.21 Coverage of public utilities in the villages of Tangua

VILLAGE	AQUEDUCT	SEWAGE	SANITATION	ELECTRICAL POWER	RESIDENTIAL GAS	TELECOM. AND INTERNET	TRANSPORT
	%	%	%	%	%	%	%
Buena Esperanza	100 %	40%	100 %	100 %	0%	60%	90%
Chavez	100 %	0%	0%	100 %	0%	60%	90%
Tambor	80%	0%	0%	100 %	0%	60%	90%
El Páramo	70%	0%	0%	100 %	0%	60%	90%
La Palizada	100 %	0%	0%	100 %	0%	100 %	90%
Marqueza Bajo	100 %	0%	0%	100 %	0%	60%	90%
Los Ajos	100 %	0%	0%	98%	0%	60%	90%
Marqueza Alto	100 %	0%	0%	100 %	0%	60%	90%
Cocha Verde	95%	0%	0%	100 %	0%	60%	90%
El Tablón Obraje	100 %	0%	0%	100 %	0%	60%	90%
San Pedro Obraje	100 %	0%	0%	99%	0%	60%	90%
El Vergel	50%	0%	0%	90%	0%	60%	90%
El Cebadal	100 %	0%	100 %	100 %	0%	60%	90%

Source (Géminis Consultores Ambientales S.A.S, 2016)

## Public Utilities

### Waterworks and Sewage

The thirteen villages are provided with village aqueducts, each one with a tank, a network of PVC pipes and a network of hoses for its correct distribution, the supply is permanent, and the pressure of this liquid is mostly high, and low in very few sectors. It has been possible to determine through studies that the water is suitable for human consumption with the exception of the aqueduct of La Palizada, which has to be supplied from other sources.

The water sources are distributed as follows, see Table 5.3.30

Table 5.3.22 Distribution of village water sources in the Municipality of Tangua

Village	Water Source	Location	Coordinates
Buena Esperanza	Arroyo Esperanza	La Los Ajos	E 969060.876 N 618568.156
Chávez	El Carmen	Predio El Pomal	E 967080.808 N 613543,109
Tambor	La Esperanza spring	Ajos - Marqueza Bajo Village	E 969060.876 N 618568.156
El Paramo	El Galeras	Marqueza Alto	E 969294.763 N 620210.298
La Palizada	Galeras Volcano and Cuscungo	Quebrada Fragual.	E 969294,762 N 620210,298
Marqueza Bajo	Stream La Joya	Los Ajos	E 969060.876 N 618568.156
		At the foothill of the Galeras	E 969450.719 N 618184.42
Los Ajos	El Mar stream	Marqueza Alto	E 969427.575 N 619408.499
Marqueza Alto	El Mar stream	Southwest of the	E 969294.763



Village	Water Source	Location	Coordinates
		village	N 620210.298
Cocha Verde	El Placer, Yacuanquer	Yacuanquer	E: 963927,664 N: 615621,833
El Tablón Obraje	El Pescador stream	El Cebadal Village	E: 967209,583 N: 613546,967
San Pedro Obraje	La Pangora stream	Municipality of Tangua	E: 963791,384 N: 612122,213
El Vergel	La peligrosa stream	El Vergel village	E 965645,269 N 612634,317
El Cebadal	La Marqueza stream and wetland	La Marqueza Village	E 969060.876 N 618568.156

Source (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.34 El Mar stream  
 Planar Coordinates Origin Magna Colombia  
 E 969427.575 N 619408.499  
 Source (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.35 Los Ajos Aqueduct,  
 Planar Coordinates Origin Magna Colombia  
 E 969060.876 N 618568.156  
 Source (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.36 Marqueza Bajo Aqueduct  
Planar Coordinates Origin Magna Colombia  
E 969450.719 N 618184.42  
Source (Géminis Consultores Ambientales S.A.S, 2016)

There is no sewerage service for the aforementioned villages, so the inhabitants of these areas use latrines and septic tanks. Except for La Buena Esperanza, whose coverage is extremely low; it only reaches 40%.

#### Solid waste collection and disposal systems

Of the thirteen Villages in the municipality of Tangua, only Buena Esperanza and El Cebadal have a municipal waste collection system, performed by EMAS, whose final disposal of waste is made into the landfill of Antanas in Pasto. While the rest of villages use burying, burning and in rare opportunities recycling as a means for disposal; unfortunately, we know that in Marqueza Bajo there is also disposal of waste to the body of water.

#### Energy and telecommunications service

All villages have the electric power service supplied by CEDENAR with good coverage, however, occasionally there is instability of voltage and high tariffs.

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On the other hand, the service of home gas networks is non-existent in these villages, the supply of this fuel is given through the purchase of pipettes from Montagas and Energas, clearly for residential use; despite the gas supply, families also use firewood and a minimum of the population uses electric power for cooking food.

#### Public transportation

The villages have primary, secondary, tertiary roads and trails, for which it is easy to enjoy the transit of people, public and private vehicles, motorcycles, bicycles and livestock.

#### Internet access

La Palizada is the only village that has a fixed telephone service and internet service provided by Claro, in addition to other mobile phone services with Claro, Movistar, Virgin and Tigo operators, whose signal quality varies depending on the sector where the inhabitants of each village are.

#### Social Services

#### Academic and Health Infrastructure

Cocha Verde and El Vergel villages do not have educational establishments, therefore, the school-age population must resort to the centers adjacent to their location. The remaining 11 Villages of the area of influence of the project have educational facilities to offer preschool and elementary services, with the exception of Tambor and Cebadal, who also offer high school services.

The table below shows the number of students for each of the academic institutions:

Table 5.3.23 Coverage of Academic Institutions at the Minor Land Units

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Minor land unit	Academic Institution	No. of Students
Tablón de Obraje	C. E. Tablón Obraje	23
San Pedro Obraje	C. E. San Pedro Obraje	12
Buena Esperanza	C. E. Niño Jesús de Praga	13
Chávez	C.E. Chávez	9
El Cebadal	I.E Nuestra Señora del Carmen	220
El Páramo	C. E. El Paramo	37
El Tambor	I.E Alberto Quijano	210
La Palizada	C. E Juan Pablo II	9
Marqueza Bajo	C. E. Marqueza Baja	11
Los Ajos	C. E. Los Ajos	42
Marqueza Alto	C. E. Marqueza Alta	60

Source (Géminis Consultores Ambientales S.A.S, 2016)

It is worth noting that in addition to these services, a school restaurant offers breakfasts, lunches or refreshments, depending on student schedules. In terms of its infrastructure, it was possible to detect that the institutions of Chavez, El Tambor, San Pedro de Obraje, Marqueza Alto and Bajo, have poor conditions with regard to their physical facilities, where we observed the need for intervention by the municipal administration.



Image 5.3.37 Institución Educativa Marqueza Baja,

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Planar Coordinates Origin Magna Colombia,  
 E 965864,402839515 N 614615,822239361  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.38 Centro educativo Vereda Tablón de Obraje,  
 Planar Coordinates Origin Magna Colombia  
 E 961796,789516449 N 609503,75706119  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.39 Institución Educativa Alberto Quijano Guerrero.  
 Planar Coordinates Origin Magna Colombia

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E 968141,701543562 N 616742,770548488  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.40 Centro Educativo Marqueza Bajo.  
 Planar Coordinates Origin Magna Colombia  
 E 969415,514399653 N 617317,028431267  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.41 Centro Educativo La Merced,  
 Planar Coordinates Origin Magna Colombia  
 E 969957,438939922 N 617941,657743682  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.42 Centro Educativo Los Ajos,  
Planar Coordinates Origin Magna Colombia  
E968830.512 N 617675.941  
Source (Géminis Consultores Ambientales S.A.S, 2016)

In terms of health, according to the information collected from the inhabitants of each sector, it was possible to determine that: only La Buena Esperanza, El Páramo, La Palizada, Marqueza Bajo and Alto do not have health services. While the others are affiliated through the subsidized and contributory regime, they must resort to the centers of the municipal seats or neighboring villages.

It is important to mention that Tablón Obraje has a mobile unit, which contains elements of assistance, a nurse and a dentist, available to the inhabitants of the village.





Image 5.3.43 Mobile unit,  
Planar Coordinates Origin Magna Colombia  
E: 964681,184 N: 612671,793  
Source (Géminis Consultores Ambientales S.A.S, 2016)

### Recreational and sports infrastructure

The most common spaces for healthy recreation, sports and leisure time in the villages are soccer courts and sports centers; they are in good and fair condition by the lack of maintenance in these spaces. However, the villages of Chávez, Cocha Verde, Tablón Obraje, and El Vergel do not have any kind of recreational or sports infrastructure.



Image 5.3.44 Marqueza Alto Court,  
Planar Coordinates Origin Magna Colombia  
E 970112.546 - N 619846.756  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.45 Los Ajos Sports Center, Planar Coordinates Magna Colombia  
E 968394.934 N 617014.959  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.46 El Cebadal Sports Center,  
Planar Coordinates Origin Magna Colombia  
E 966064313 - N 614759.33  
Source (Géminis Consultores Ambientales S.A.S, 2016)

## Housing

There are approximately 1036 houses of which 56 are uninhabited, the infrastructures of these houses are in their great majority in fair and bad condition, their constructions are in brick, bahareque, rammed earth, adobe, their floors are in cement, tile and earth, and ceilings are of fiber cement, zinc and clay tile.

## Transport Infrastructure

Villages have between 1 and 5 roadways linking them to the rest of the municipality, which are divided into primary, secondary and tertiary roads and trails, most of which are unpaved; their current state is fair with a notorious adverse impact on the road grid, especially during the rainy seasons. Even so, these roads are operable and pedestrians, public and private vehicles, motorbikes, bicycles and livestock transit through them.

It is worth noting that El Tambor village has a static pedestrian bridge, which allows the passage of people avoiding road traffic.

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Image 5.3.47 Pedestrian bridge El Tambor village,  
Planar Coordinates Origin Magna Colombia  
E 968165.405 N 616705.369  
Source (Géminis Consultores Ambientales S.A.S, 2016)

Mobility assessment for the villages which come into direct contact with the Rumichaca - Pasto road project,

Cocha Verde village:

It is important to mention that the main access to the village is the one commonly known as the old road to Tangua, in which according to the moments measured on April 26 and May 15 of this year, the largest transit of people was identified since on April 26th, from 30 to 41 cars are passing in the schedules of 6 to 8 am and from 12 to 2 pm, and up to 40 in the hours of 4 to 6 pm. In the measurement done on Sunday May 15th the greater amount of transit is of cars with the difference of an increase to 87 vehicles in the schedule of 6 to 8 am and up to 54 in the schedule from 4 to 6 pm. There is also a marked difference in the increase of taxis that pass on Sunday since out of the 7 that transit on Tuesday, April 26, this number increases to 67 in the time from 12 to 2 pm. Therefore, we can conclude that the mobility between weekdays and weekends is different since on Sunday the movement increases notably for access purposes, this effect usually happens due to the inhabitant's activities who make use of this access.

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Image 5.3.48 Old access to Tangua  
 Planar Coordinates Origin Magna Colombia  
 E 961962,067 N 610443,53  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

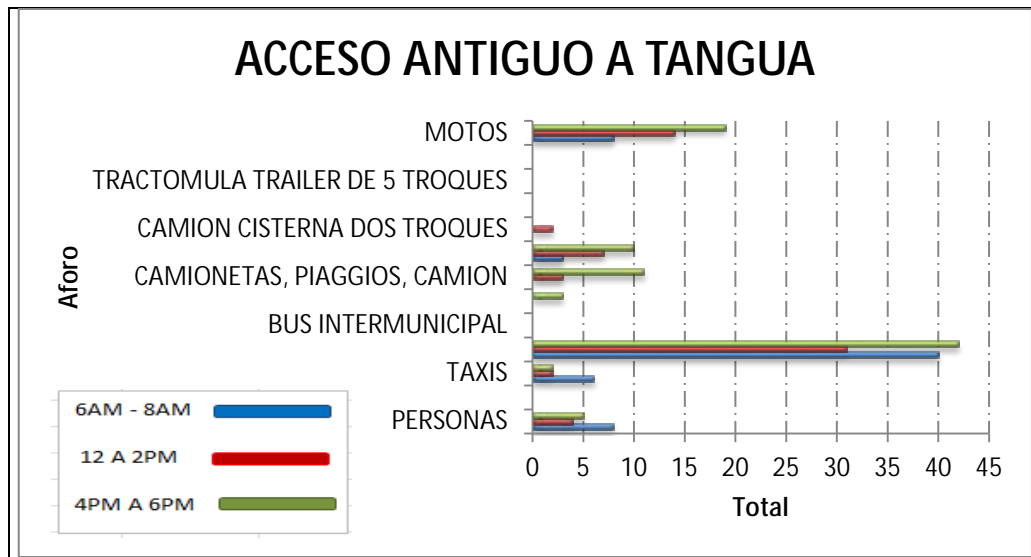


Figure 5.3.52 Reference chart from April 26  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

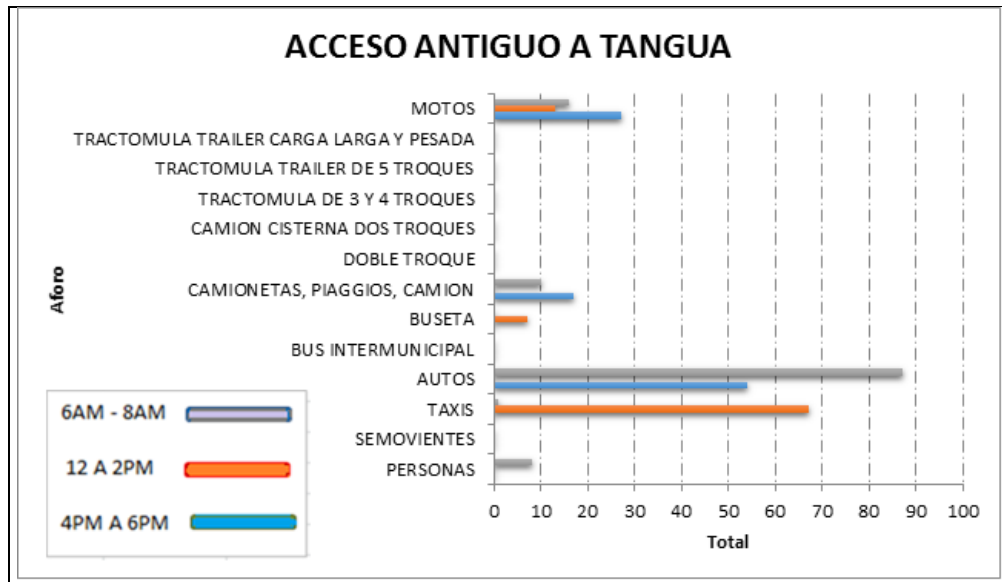


Figure 5.3.53 Reference chart from May 15  
Source (Géminis Consultores Ambientales S.A.S, 2016)

#### El Vergel Village:

It is important to recognize that there is an unpaved tertiary road in bad condition that communicates the village from the municipal seat of Tangua, therefore the two main accesses of Tangua on the road that The Rumichaca - Pasto road project intervenes, are considered for the assessment. See Annex 5.3.3.c

First Access



Image 5.3.49 Entrance to the Municipal seat - Municipality of Tangua  
 Planar Coordinates Origin Magna Colombia  
 E 964732 N 61287  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

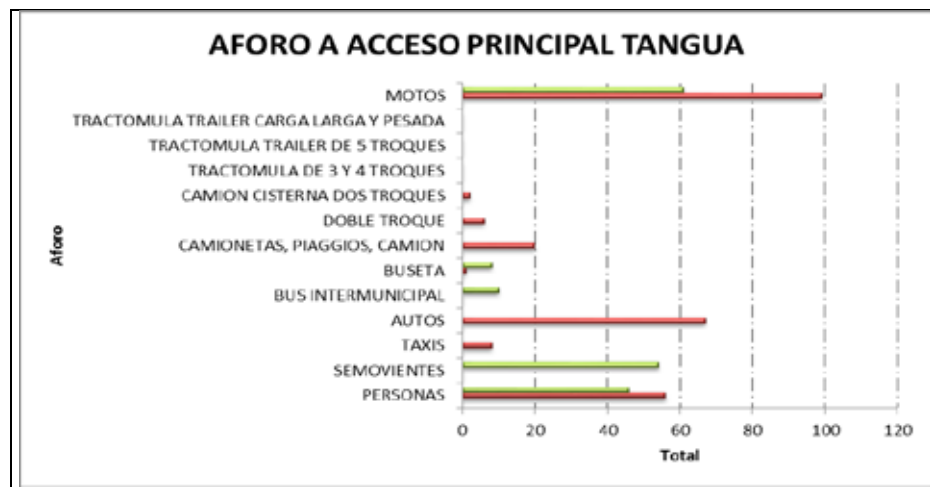


Figure 5.3.54 Reference chart from April 26  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

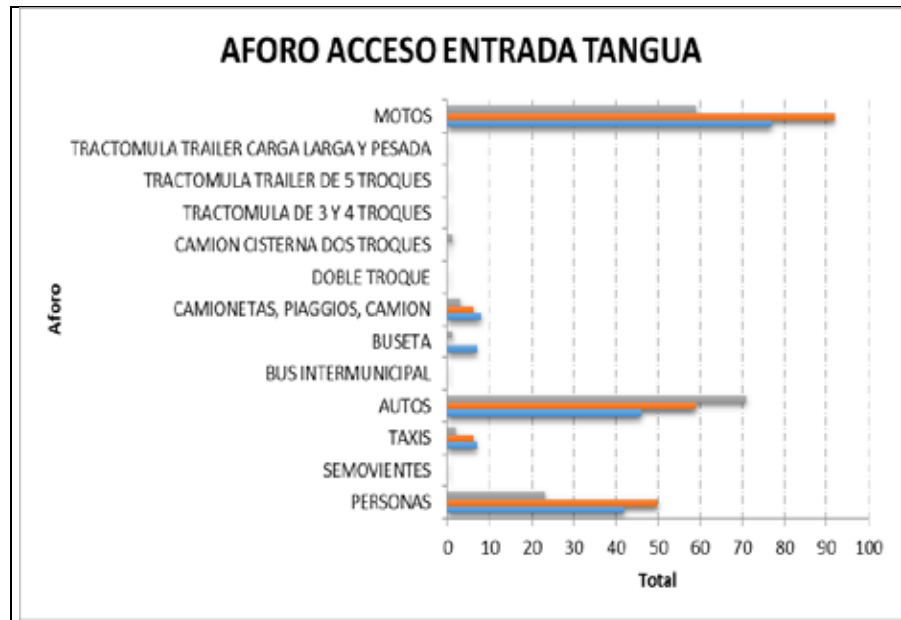


Figure 5.3.55 Reference chart from May 15  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

Second access



Image 5.3.50 Access to Tangua / Bolívar  
 Planar Coordinates Origin Magna Colombia  
 E 965327,767 N 613008,541



Source (Géminis Consultores Ambientales S.A.S, 2016)

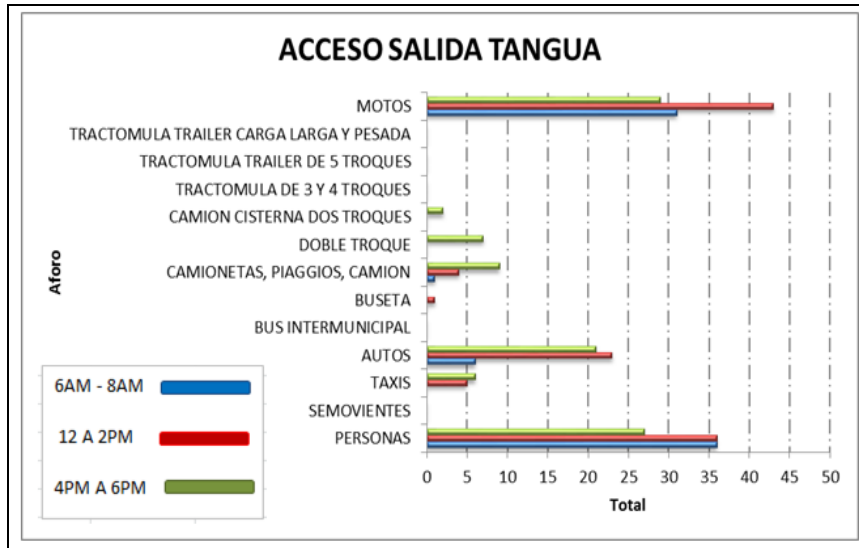


Figure 5.3.56 Reference chart from April 26

Source (Géminis Consultores Ambientales S.A.S, 2016)

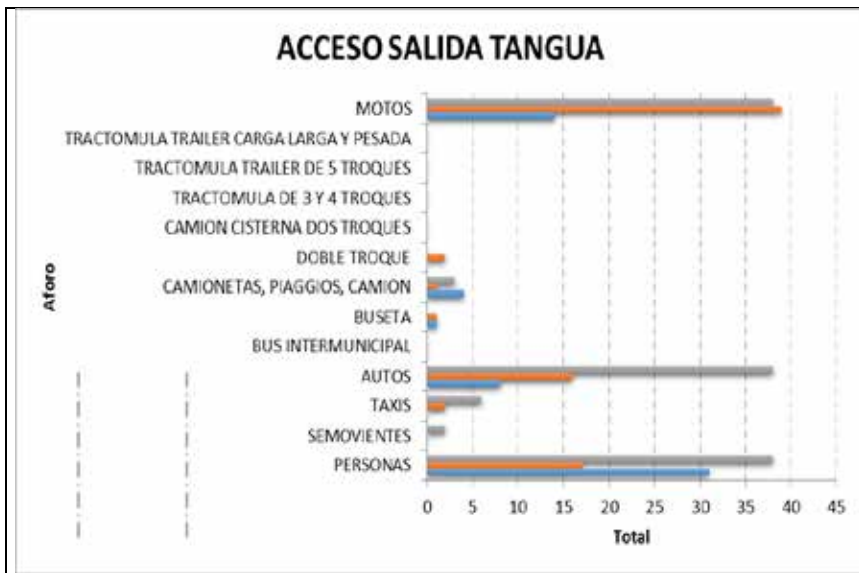


Figure 5.3.57 Reference chart from May 15

Source (Géminis Consultores Ambientales S.A.S, 2016)



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La Buena Esperanza Village:

The access to this village is located on the road called Circunvalar Galeras, which has direct contact with the road corridor of the Project, for that reason the mobility assessment is related to the measurement made in the access to Circunvalar Galeras in the Municipality of Tangua described below:



Image 5.3.51 Access to Circunvalar Galeras Municipality of Tangua, Planar Coordinates Origin Magna Colombia E 965823,347 N 614796,97 Source (Géminis Consultores Ambientales S.A.S, 2016)

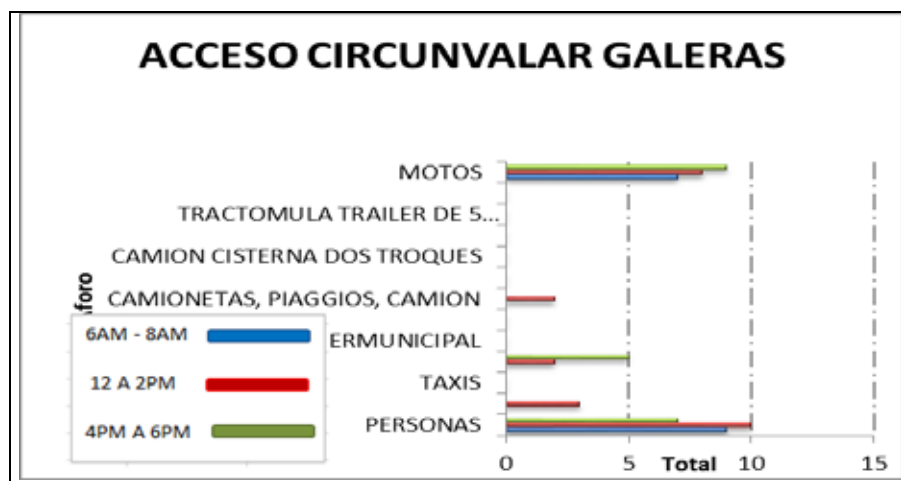


Figure 5.3.58 Reference Chart from April 26 - 2016  
Source (Géminis Consultores Ambientales S.A.S, 2016)

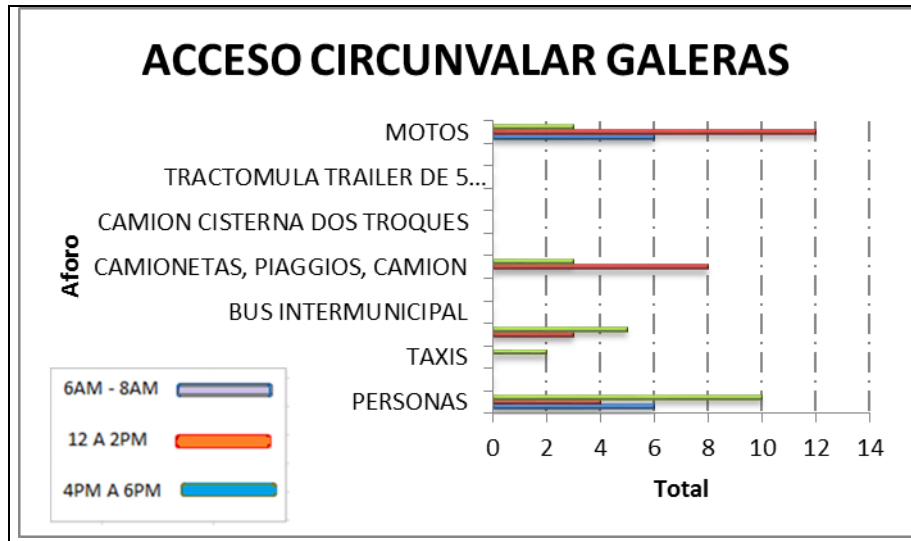


Figure 5.3.59 Reference Chart from May 15 - 2016  
Source (Géminis Consultores Ambientales S.A.S, 2016)

According to the measurements made in the access to Circunvalar Galeras on April 26 and May 15, we concluded that on Sunday, May 15, up to 12 motorcycles passed by from 12 to 2 pm and up to 3 and 6 bikes from 6 am to 8 am and from 4 to 6 pm respectively. In terms of the traffic of motorcycles on April 26th, we observed between 7 and 9 in the three moments measured during that day. The second trend of traffic is inclined towards the passage of people, since the measurement made during the week recorded from 7 to 10 people in the 3 days of measurement and on Sunday May 15 from 4 to 10 people; there is a difference in the two days for the third trend since for April 26th there is the transit of taxis in third place and for May 15 the third place is the mobility of trucks, piaggios and vans. We can therefore identify that there will be greater impact in the traffic of motorcycles and pedestrians if the project intervenes the access to Circunvalar Galeras. See Annex 5.3.3.c

El Cebadal Village:

There are three (3) significant road accesses in the village: Alternate route to the village of Cebadal, access to Institución Educativa Nuestra Señora del Carmen in El Cebadal, and access to the Municipality of Yacuanquer, where mobility measurements were carried out in order to know the flow of different vehicles described below:



Image 5.3.52 Access to alternative route Cebadal- Municipality of Tangua  
 Planar Coordinates Origin Magna Colombia  
 E 965814 N 614738  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

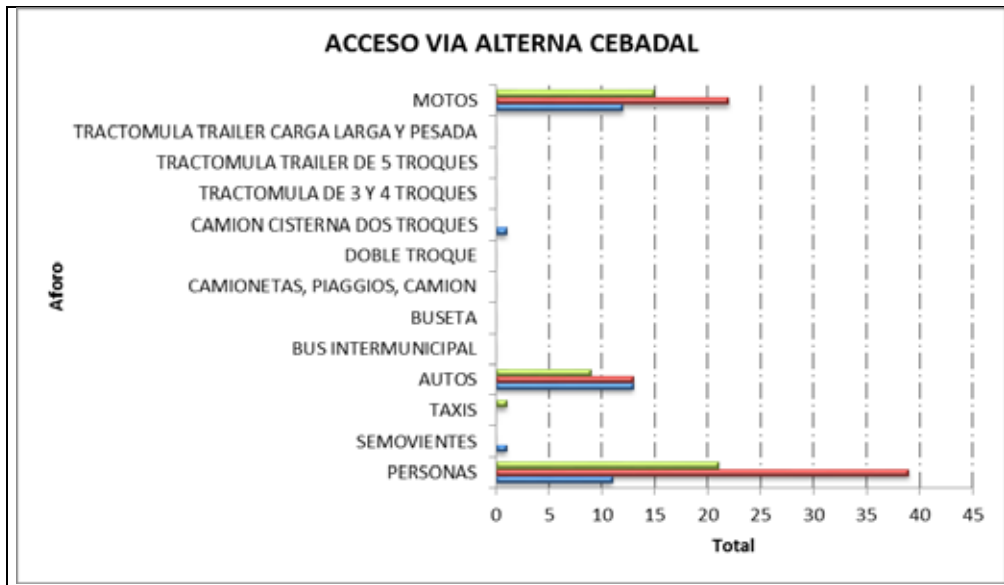


Figure 5.3.60 Reference chart from April 26  
Source (Géminis Consultores Ambientales S.A.S, 2016)

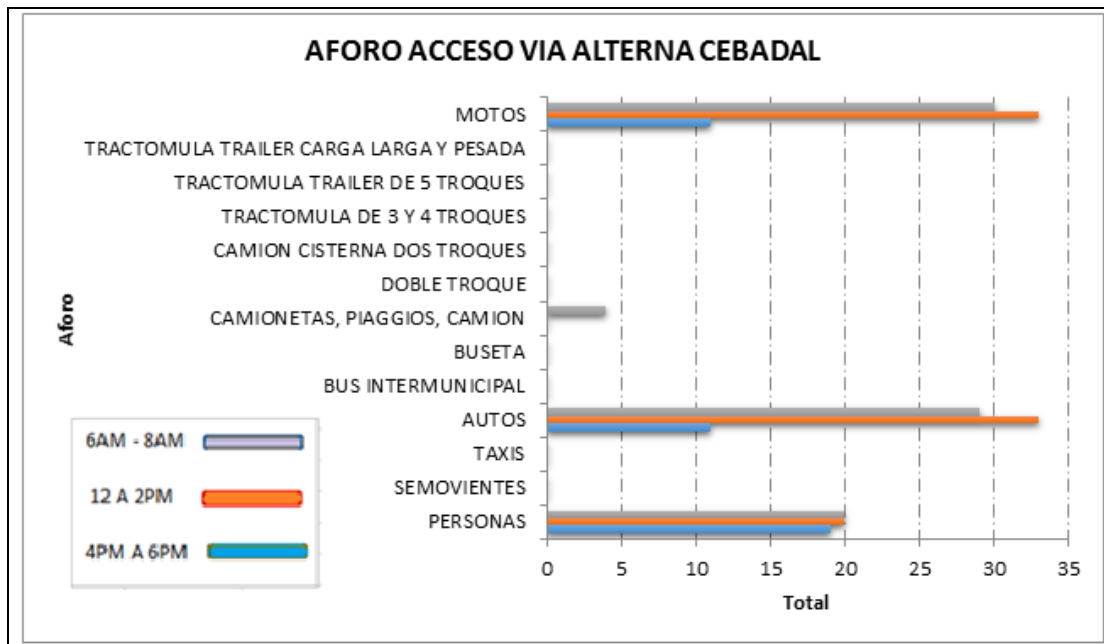


Figure 5.3.61 Reference chart from May 15  
Source (Géminis Consultores Ambientales S.A.S, 2016)

According to the assessments carried out on Tuesday, April 26 and Sunday, May 15, we concluded that pedestrian traffic is the most significant on Tuesday for the three hours calculated (6 to 8 AM, 12 to 2 PM and 4 to 6 PM). Followed by the flow of motorcycles which does not exceed the trend of 22 per day. In third place is the flow of automobiles which reflects a greater trend in schedules from 6 to 8 am and from 12 to 2 pm. There is also a low level of mobility of livestock, taxis and trucks, which does not exceed two of each of them per day. This is different from the reality that is presented on Sunday in which motorcycles are the ones that travel the most through the alternative road to the village of El Cebadal, except in the hours of 4 to 6 pm, in which the major traffic is of pedestrians. Additionally, for the hours of 6 to 8 am and from 12 to 2 pm the traffic of automobiles occupies the second place in terms mobility, with a tendency of 28 to 33 and pedestrians are in third place. Finally, there is a low flow of vans and piaggios related to 4 vehicles of this type per day. See Annex 5.3.3c



Image 5.3.53 I.E. Cebadal Access - El Cebadal Village  
 Planar Coordinates Origin Magna Colombia  
 E 965855,734 N 614741,105  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

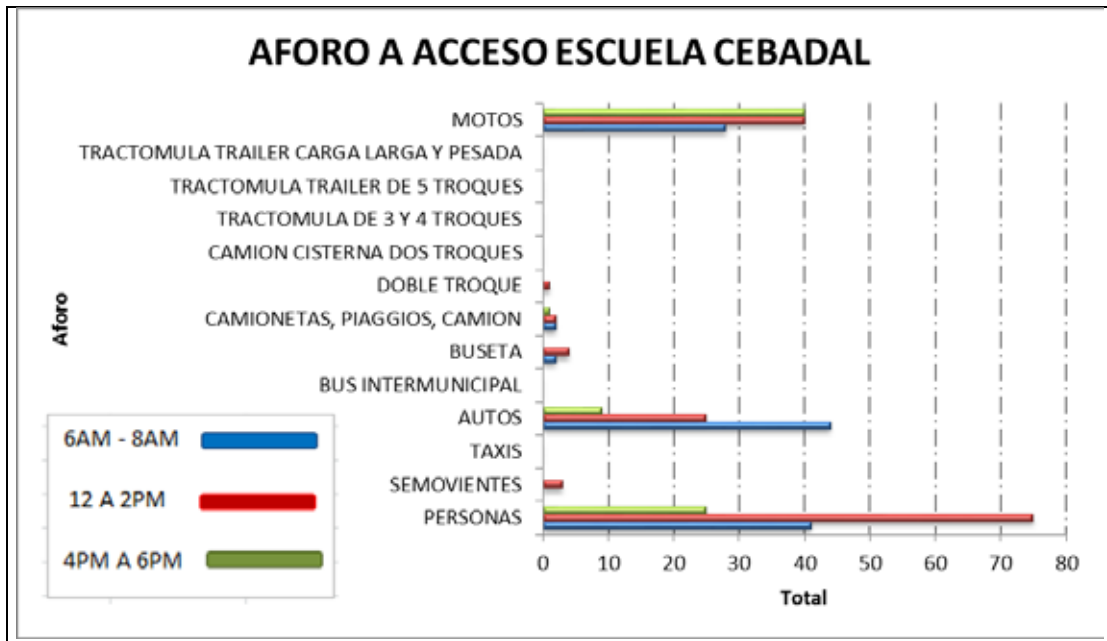


Figure 5.3.62 Reference chart from April 26  
Source (Géminis Consultores Ambientales S.A.S, 2016)

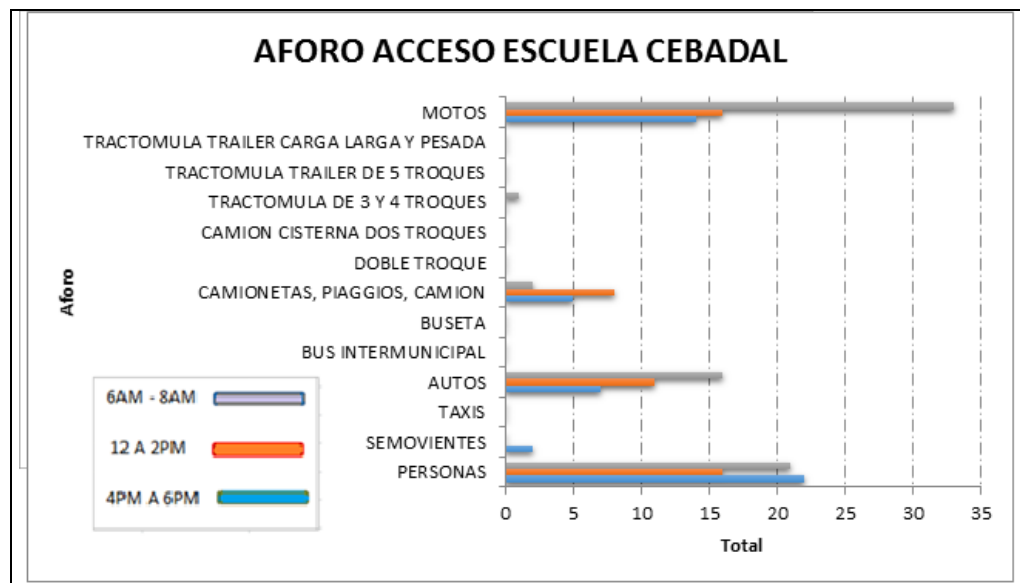


Figure 5.3.63 Reference chart from May 15



Source (Géminis Consultores Ambientales S.A.S, 2016)

In relation to the assessments made on the days of Tuesday, April 26 and Sunday, May 15, it is possible to conclude that for Tuesday, the most significant transit is of pedestrians reaching a tendency of 75 in the schedule of 12 to 2 pm, followed by the transit of automobiles on the first measurement moment with a flow of 45 cars. In third place is the transit of motorcycles by maintaining the same mobility index in the hours of 12 to 2 pm and 4 to 6 pm, and with a low level of mobility are livestock, semi-trucks, small buses, vans and piaggios not exceeding five, in each moment measured.

On Sunday the highest traffic was of motorcycles, followed by pedestrians. In third place is the mobility of automobiles with a record that oscillates between 8 and 16 in the three moments measured. Fourth are mini trucks, piaggios and vans. Finally with a low rate of mobility (3 at all times measured) are livestock and heavy duty trucks. The information gathered allows us to conclude that when comparing the figures on Tuesdays and Sundays there is a greater traffic of vehicles and pedestrians on the weekday. See Annex 5.3.3c

#### Access to Yacuanquer

According to the mobility assessments on Tuesday, April 26 and May 15 of this year, we concluded that the greatest transit of access to the municipality of Yacuanquer is automobiles, followed by motorcycles. On Sunday, there is a significant traffic of mini trucks, piaggios and vans, as opposed to Tuesday, in which the traffic of these vehicles is less than ten (10). We also experienced low traffic of trucks, semi-trucks, small buses, buses and taxis with a record of less than 20 of each one of these types of vehicles in the three measured moments (6 to 8 AM, 12 to 2 PM and 4 to 6 PM). See annex 5.3.3c

See images and figures:

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Image 5.3.54 Access to Yacuanquer - El Cebadal village.  
 Planar Coordinates Origin Magna Colombia  
 E 965580,474 N 614597,496  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

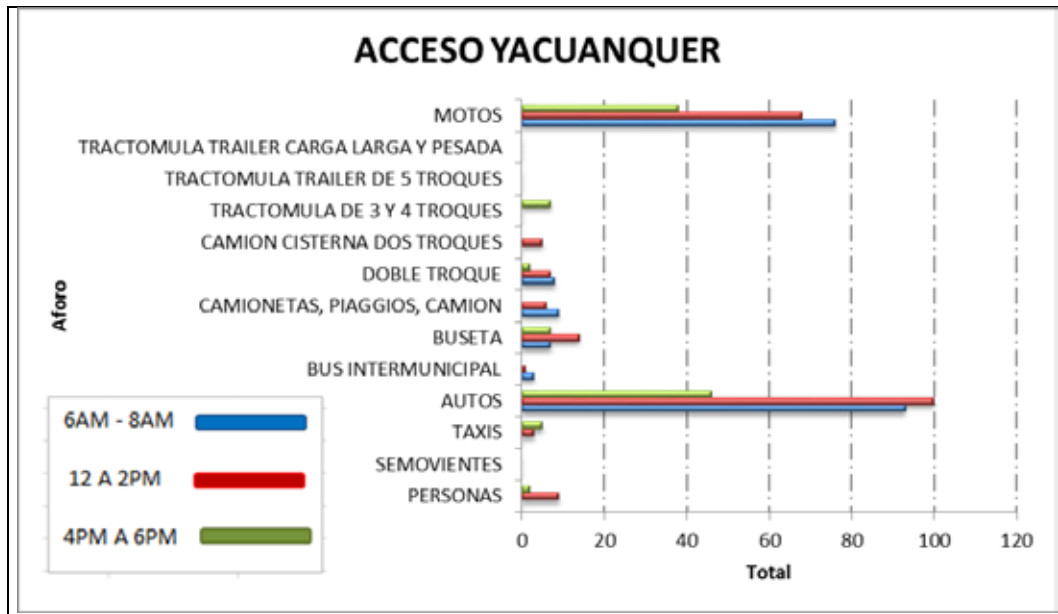


Figure 5.3.64 Reference chart from April 26  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

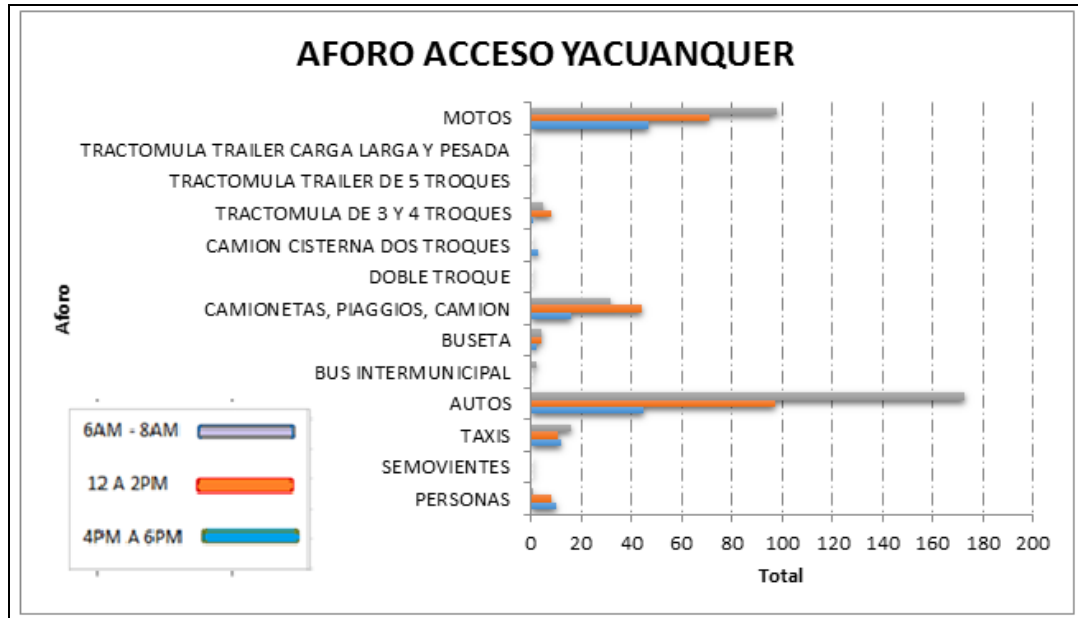


Figure 5.3.65 Reference chart from May 15  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Chávez Village

The access to this village is on the access road to the San Antonio Village, which is located in the road corridor of the Rumichaca - Pasto project, therefore the mobility analysis is related to the assessment at the access of San Antonio Village described below:



Image 5.3.55 Access to the Village of San Antonio in the Municipality of Tangua Planar Coordinates, Origin Magna Colombia E 966452,478 N 614270, 1 Source (Géminis Consultores Ambientales S.A.S, 2016)

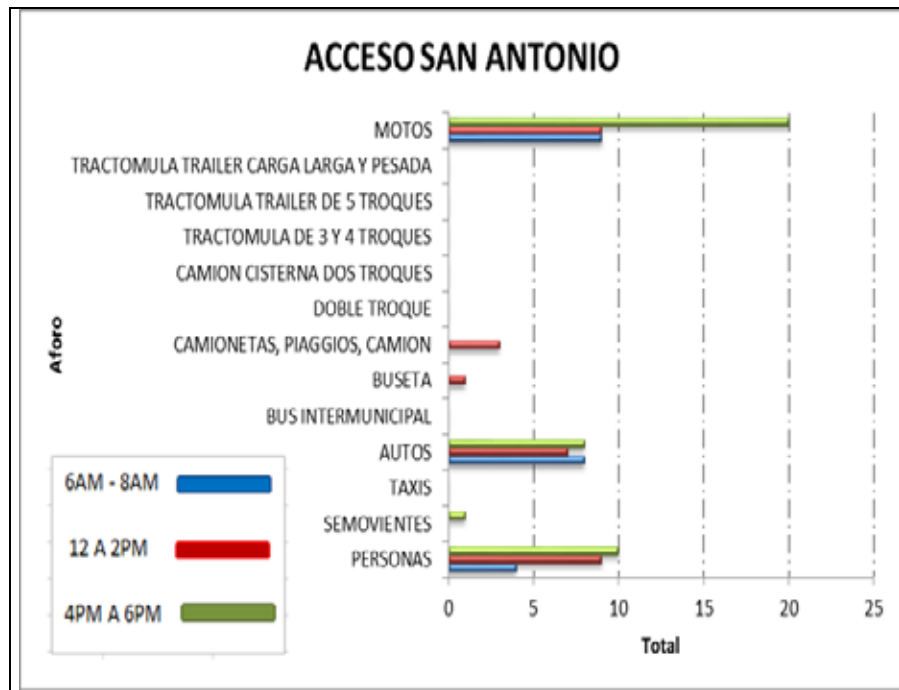


Figure 5.3.66 Reference chart from April 26 Source (Géminis Consultores Ambientales S.A.S, 2016)

With regards to the analysis carried out on April 26 to the access to the San Antonio Village, the conclusion reached is that the larger portion of vehicles driving through this roadway is comprised by motorcycles, as said number reaches up to 20 during the time frame (6 to 8 am) and up to 8 during the other two time frames (12 to 2 pm and 4 to 6 pm); this is followed by a lower amount of pedestrian traffic, with 8 - 10 individuals passing through in the (6 - 8 am and 12 - 2 pm) time frames, and only 4 people between 4 pm and 6 pm. Lastly, the third trend leans towards automotive traffic, which range from 7 to 8 in the three time frames measured. Therefore, should the access to this road be affected by the road project, the greatest impact would be on motorcycle and pedestrian traffic. See annex 5.3.3c

Village of El Tambor:

Access to this village is located on the roadway of the Rumichaca - Pasto project. Therefore, the mobility analysis is in accordance with the analysis and measurements described below:



Image 5.3.56 Access to the Village of El Tambor in the Tangua Municipality.  
Planar Coordinates, Origin Magna Colombia  
E 968039,64 N 616746,405  
Source (Géminis Consultores Ambientales S.A.S, 2016)

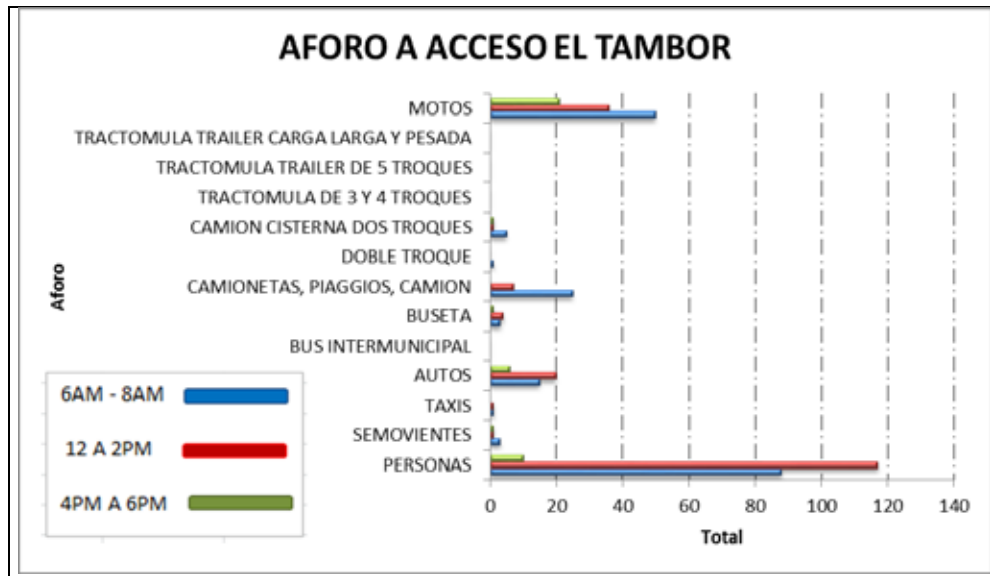


Figure 5.3.67 Reference chart from April 26  
Source (Géminis Consultores Ambientales S.A.S, 2016)

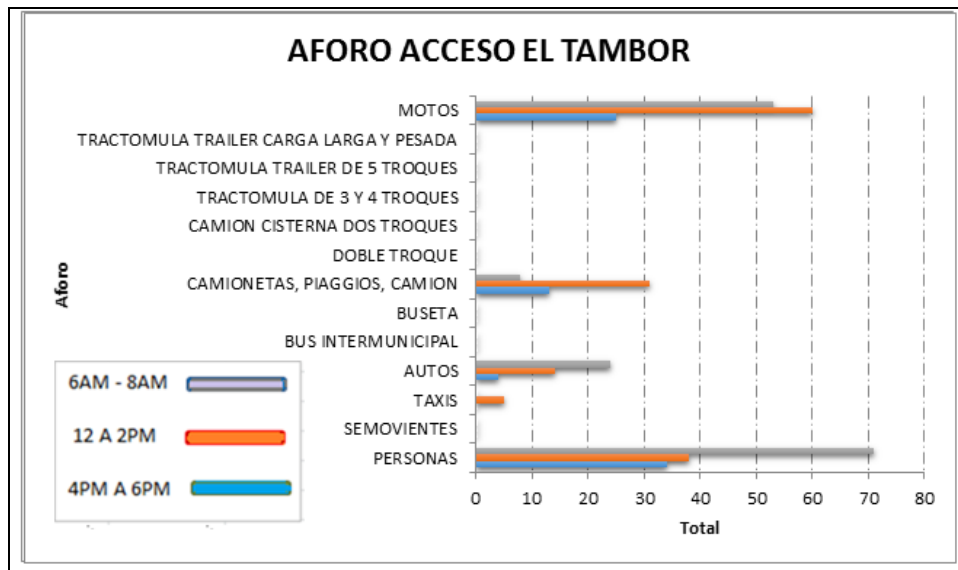


Figure 5.3.68 Reference chart from May 15  
Source (Géminis Consultores Ambientales S.A.S, 2016)

The access to the village of El Tambor is a third-level roadway which is presently in less-than proper conditions; in order to conduct the mobility assessment, measurements were taken on April 26 and May 15 of this running year. It was identified that on both days pedestrian traffic was the most frequent one. On a weekday such as April 26, up to 90 people passed through during the first time frame (6 - 8 am), and up to 117 during the noon time frame (12 - 2 pm); on a Sunday, such as May 15, up to 38 people passed through during the noon and afternoon time frames (12 - 2 pm and 4 - 6 pm), and up to 71 people during the morning measurement (6 - 8 am). This is then followed by motorcycle and van/SUV traffic, which allows us to conclude that mobility trends between weekdays and weekends are similar related to the higher transit of pedestrians. Finally, traffic flows of less than 30 were identified for vehicles such as pick-up trucks, piaggios, trucks and automobiles during the three measurement time frames for both days. See annex 5.3.3c

Village of La Palizada

Access to this village is located on the roadway of the Rumichaca - Pasto project. Therefore, the mobility analysis is in accordance with the analysis and measurements described below:



Image 5.3.57 Access to the Village of La Palizada in the Municipality of Tangua

Planar Coordinates, Origin Magna Colombia  
 E 972396,12 N 618118,47  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

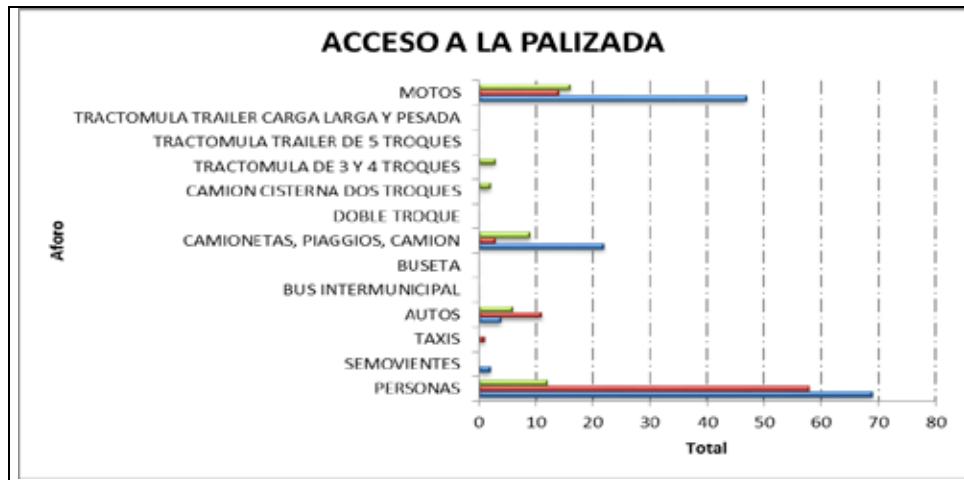


Figure 5.3.69 Reference chart from April 26

Source (Géminis Consultores Ambientales S.A.S, 2016)

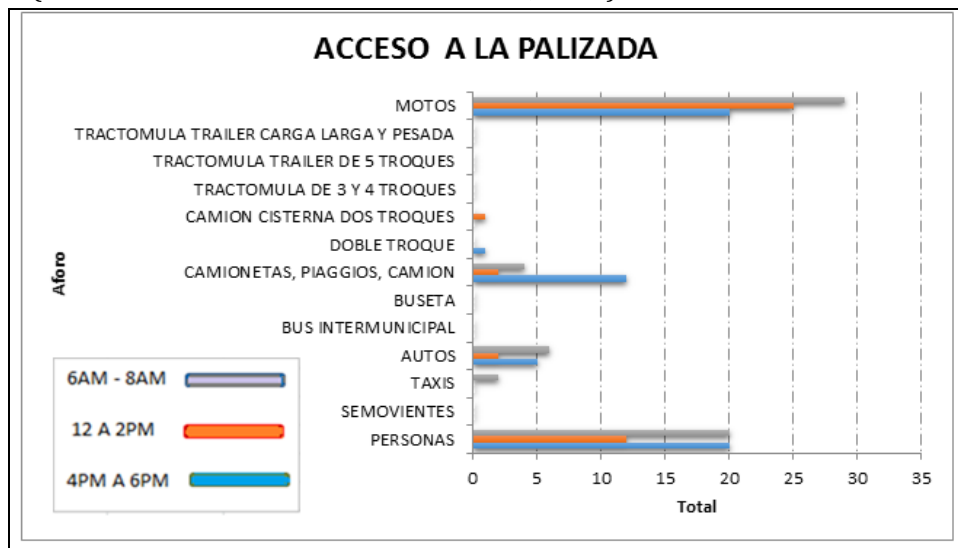


Figure 5.3.70 Reference chart from May 15

Source (Géminis Consultores Ambientales S.A.S, 2016)



Access to the village of La Palizada is provided by a tier-two roadway in less-than proper state, where mobility assessments were made on April 26 and May 15 of this running year. It was identified that for Tuesday, April 26, traffic is mostly comprised by pedestrian, with up to 70 individuals passing through on the morning time frame (6 - 8 am) and 58 on the noon time frame (12 - 2 pm). A different case is true for the measurements taken on April 15, where the more frequent traffic is made up by motorcycles with between 20 and 29 passing through each of the three measurement time frames (6 am - 8 am, 12 - 2 pm and 4 - 6 pm). The greater motorcycle traffic on Tuesday happened on the 6 am to 8 am time frame, with a total of 48 motorcycles. This attests to the fact that variations in mobility in this roadway between weekdays and weekends is based on changes in the transit of pedestrians and motorcycles since, on a weekday, a higher grade of pedestrian traffic was identified, while during the weekends traffic tends to be comprised more by motorcycles. Finally, our observations show that less than 20 other vehicles such as piaggios, pick-up trucks, trucks and automobiles comprise the traffic for those categories during the two days measured. See annex 5.3.3c

Village of Marqueza Alto:

Access to this village is located on the roadway of the Rumichaca - Pasto project. Therefore, the mobility analysis is in accordance with the analysis and measurements described below:



Image 5.3.58 Access to the Village of Marqueza Alto - Municipality of Tangua  
 Planar Coordinates, Origin Magna Colombia  
 E 970811,177 N 618785,715  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

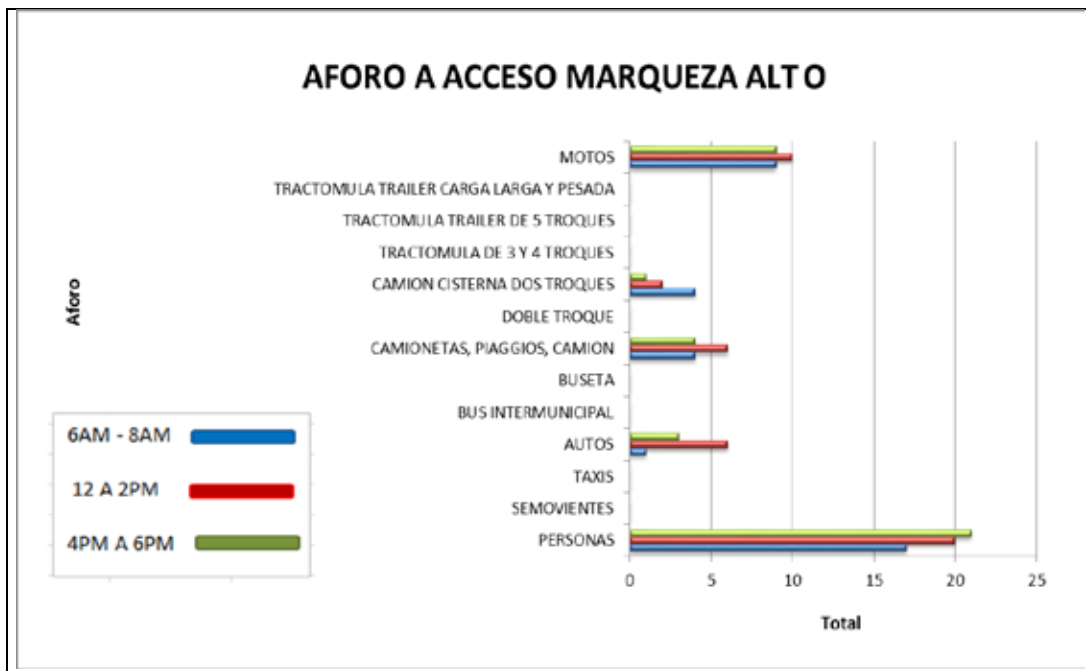


Figure 5.3.71 Reference chart from May 28, 2016  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

For the performance of this mobility assessment, the reference taken came from the measurements carried out on the main access roadway to the Village of Marqueza Alto, on May 28 in which, during the three measurement time frames (6 - 8 am, 12 - 2 pm y 4 - 6 pm), the greater amount of traffic comes from pedestrians, followed by motorcycles. Cars, SUVs, pick-up trucks and piaggios drive through the access road to the village, but only at a low frequency of between 3 and 7, with slight variations according to each time frame. See annex 5.3.3c

Facilities

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In terms of community facilities, the villages have chapels and communal huts, except for Chávez, Tablón de Obraje and El Vergel, which do not have a chapel. Chávez, El Tambor, Marqueza Baja, Cocha Verde, Tambor de Obraje and San Pedro de Obraje, do not have a communal hut.



Image 5.3.59 Virgen del Carmen Church - Village of Cebadal,  
Planar Coordinates, Origin Magna Colombia  
E 965868,077230108 N 614630,086199148  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.60 Chapel in Marqueza Bajo.

Planar Coordinates, Origin Magna Colombia  
 N 969415,514399653 E 617317,028431267  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.61 Chapel in Marqueza Alta,  
 Planar Coordinates, Origin Magna Colombia  
 E 970111.099 - N 619846.977  
 Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.62 Chapel in Los Ajos,  
 Planar Coordinates, Origin Magna Colombia  
 E 968457.784 N 617799.048

Source (Géminis Consultores Ambientales S.A.S, 2016)

We can conclude that all thirteen villages are in almost identical conditions regarding the level of coverage and quality of utilities (waterworks, sewage, sanitation and telecommunications) except for the village of El Vergel, which has a low waterworks coverage since the provision of water is limited to certain hours, the village of La Buena Esperanza, which shows a low coverage in sewage, but prevents residents from using septic tanks. This village also has an agreement with the EMAS, for waste collection; this company is then tasked with their final disposition. Finally, el Cebadal also has an agreement for waste collection and disposal.

Therefore, through our surveys and visits to the region we were able to ascertain that the ten remaining villages do not have any utilities regarding sewage and sanitation, which poses a risk for the population, since the means being used to offset this are causing a significant environmental impact.

With regards to social services in the municipality of Tangua, some sectors have educational and health infrastructure, communal, recreational and sports buildings and settings. However, in those villages which do not have said services, or even in some which do, people choose to travel to the municipal capital or to other municipalities nearby, because the services they find there are more comprehensive and of a better quality.

Functional Unit 5.1

Municipality of Pasto

The information and percentages described in the table corresponding to the coverage of public utilities in the minor land units in the Municipality of Pasto were obtained based on the application of the village data sheets, with residents native to the region.

Table 5.3.24 Public utilities coverage

VILLAGE	AQUEDUCT	SEWAGE	SANITATION	ELECTRICAL POWER	RESIDENTIAL GAS	TELECOMMUNICATIONS AND INTERNET	TRANSPORT
	%	%	%	%	%	%	%
Almatán to	90%	60%	0%	100%	0%	70%	95%
Abiján to	100%	0%	100%	100%	0%	100%	95%
Abiján to	99%	0%	0%	98%	0%	70%	95%
Catambuco	100%	55%	0%	100%	0%	70%	95%
Locacional	100%	0%	0%	97%	0%	70%	95%
Merced	100%	85%	0%	100%	0%	100%	95%
San Jose de Catambuco	100%	0%	0%	100%	0%	70%	95%
Quercillas	95%	0%	0%	100%	0%	70%	95%
Catambuco Centro	100%	100%	100%	100%	0%	100	95%

Source: Village Data Sheet (Géminis Consultores Ambientales S.A.S, 2016)

Utilities

## Waterworks and Sewage

This service is provided through village aqueducts. Vocacional and San José de Catambuco get their water from a spring. However, water for the village of Vocacional is not suitable for human consumption; water is muddy, with a foul taste and smell, and shows contamination from cattle farming.

On the other hand, village aqueducts provide good water supply, with normal high pressure and a constant flow; however, different surveys have shown that the water in La Merced is not suitable for human consumption as it is muddy.

Aqueducts take their water from the sources listed in the table below:

Table 5.3.25 Distribution of village water sources in the Municipality of Pasto

Village	Water Source	Location	Coordinates
Gualmatán Alto	From the volcanic hillside	National Parks	
Cubiján Alto and Bajo	Piquisique Spring, Aroya stream.	350 meters from the village, Laguna Negra and from the Galeras volcano.	E 970525,704 N 620060,767
Catambuco Centro	Miraflores, Taminango, San José	Two in Catambuco Centro and one in the boundary with the township of Gualmatán (San José).	E 975213.352 N 620121.426 E 974149.982 N 618364.022
Vocacional	Spring for the El Cipre Stream	Cubiján Sector	E 970525,704 N 620060,767
La Merced	Miraflores - Cerradora	Village of La Merced	E 973159.504 N 617968.133 E 974149.982 N 618364.022
San Jose de	Springs, Calderas,		E 972652.042

Village	Water Source	Location	Coordinates
Catambuco	Recuerdo		N 619951.13 E 976021.538 N 619372.767
Huertecillas	Gualmatán Basin	Micro Municipality of Gualmatán, Village of Huertecillas	E 972812,539 N 621302,352

Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.63 Aqueduct in Taminango - Catambuco,  
Planar Coordinates, Origin Magna Colombia  
E 975213.352 N 620121.42

Source (Géminis Consultores Ambientales S.A.S, 2016)





Image 5.3.64 Aqueduct in San José,  
Planar Coordinates, Origin Magna Colombia  
E 972652.042 N 619951.13  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.65 Aqueduct in La Merced,  
Planar Coordinates, Origin Magna Colombia  
E 973159.504 N 617968.133  
Source (Géminis Consultores Ambientales S.A.S, 2016)

Regarding sewage, and according to the information collected, we can state that the villages of Vocacional, San José de Catambuco, Huertecillas and Cubiján do not have sewage. Therefore, residents use septic tanks and latrines. The five remaining villages do have sewage systems, although not with 100% coverage; therefore, it is important to expand sewage coverage and improve or replace the existing infrastructure which is in poor conditions, which results in a poor service.



Image 5.3.66 Sewage in San José de Catambuco,  
Planar Coordinates, Origin Magna Colombia  
E 976153.309 N 620767.55  
Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Solid waste collection and disposal systems

The villages of Cubiján and Catambuco Centro have waste collection schemes through EMAS, which is also tasked with the final disposition of the waste at the Antanas landfill. The exception to this is the village of Centro, for which final disposition is made at the Daza landfill. It is worth noting that the frequency at which the sanitation trucks drive through to collect the waste is between 2 and 3 times per week.

The other villages, which do not have a waste collection system, dispose of their waste through composting, in the open, through burial or burning; a tiny portion of the population recycles, and the residents of La Merced take their waste down to the municipal capital.

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Electrical power and telecommunications services: coverage and quality.

All villages have electrical power, provided by CEDENAR, with very good quality and coverage levels.

With regards to residential gas, this service is non-existent in all of the aforementioned villages, but there is a provision of gas tanks and bottles for home consumption, although residents mostly use wood for cooking.

#### Public transportation

Most of the villages have public transport services and private vehicles, public and private motorcycles, animals and bicycles. The cost of transportation is \$1,500 per person, and an average trip will cost \$10,000.

#### Telecommunications and Internet

La Merced, Cubiján and Catambuco Centro, are the only sectors which, in addition to cellphone coverage as provided for other villages, also have landlines and Internet services through providers Movistar and Claro, which have very good coverage.

#### Social Services

#### Academic and Health Infrastructure

Most of the villages have access to academic services, with facilities for basic primary education, except for Vocacional and Huertecillas. It is worth noting that Catambuco has the Institución Educativa Santa Teresita (Santa Teresita Academic Institution), which teaches basic primary and high-school.

The table below shows the number of students for each of the academic institutions:

Table 5.3.26 Coverage of Academic Institutions at the Minor Land Units in the Municipality of Pasto

Minor Land Units	Academic Institution	No. of Students
Gualmatán Alto	Centro Educativo Gualmatán	12
Cubiján Bajo	Centro Educativo Cubiján Bajo	25
Catambuco Centro	Institución Educativa Santa Teresita	125
La Merced	Escuela Rural Mixta La Merced (La Merced Mixed Rural School)	10
San Jose de Catambuco	Escuela Rural Mixta San José de Catambuco (San José de Catambuco Mixed Rural School)	13

Source (Géminis Consultores Ambientales S.A.S, 2016)

In terms of services, the institutions have a school cafeteria and provide breakfast, lunch or a snack, depending on how much time registered students spend in school each day. No issues or problems regarding infrastructure are observed or mentioned; however, residents to ask for more support from the municipal administration, because of the lack of recreational and leisure spaces, as well as of academic and teaching materials.



Image 5.3.67 Institución Educativa Santa Teresita Cubiján Campus.  
Planar Coordinates, Origin Magna Colombia,  
E 972711,268160108 N 618112,26301017  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.68 Institución Educativa Cubiján Bajo,  
Planar Coordinates, Origin Magna Colombia  
N 972708,423179918 E 618110,039464314  
Source (Géminis Consultores Ambientales S.A.S, 2016)

With regards to health services, the residents of the nine villages in the Municipality of Pasto have access to health networks, mostly through the subsidized regime; some of

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them also belong to the contributive regime. In case of an emergency or whenever a situation requires it, citizens travel to the health centers or hospitals in the municipal capital, although they usually also resort to traditional medicine by going to healers, spiritual doctors, midwives and bonesetters who are more prominent in Centro Centro; it is worth noting that this village actually has a hospital, with proper infrastructure to provide optimal services to people in need.



Image 5.3.69 Catambuco Health Center,  
Planar Coordinates, Origin Magna Colombia  
E 975597.144 N 620605.607  
Source (Géminis Consultores Ambientales S.A.S, 2016)

#### Recreational and sports infrastructure

With regards to recreational and sports infrastructure, it is worth noting that only the villages of San José de Catambuco and Catambuco Centro have multi-purpose sports facilities, which are used by some residents in these sectors and in nearing villages for sports matches; however, their current, less-than-optimal condition prevents a more suitable use of these spaces.



Image 5.3.70 Catambuco Multi-Purpose Sports Facility,  
Planar Coordinates, Origin Magna Colombia  
E 974912.657 N 620514.215  
Source (Géminis Consultores Ambientales S.A.S, 2016)



Image 5.3.71 San José Multi-Purpose Sports Facility,  
Planar Coordinates, Origin Magna Colombia  
E 976045.677 N 619210.109  
Source (Géminis Consultores Ambientales S.A.S, 2016)

## Housing

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According to the information collected, estimates show that these villages within the Municipality have 3,124 houses, of which 28 are uninhabited mainly in La Merced (1), Huertecillas (2), Gualmatán Alto (5) and Catambuco Centro (20). The main causes for this phenomenon are voluntary displacement and seasonality.

The physical condition of the housing facilities in Cubiján and Huertecillas is good, and the infrastructure in the other villages is not as good, since there is evident wear and tear. Constructions are made of brick, wood and pressed mortar; floors are made from tile, cement, wood and dirt, roofs are made from fiber-cement roof tiles, baked clay and cement.

**Transport Infrastructure:**

Villages have between 2 and 4 roadways linking them to the rest of the municipality, which are divided into first, second and third level roads, most of which are unpaved; their current state is fair with a notorious adverse impact on the road grid, especially during the rainy seasons. Even so, these roads are deemed to be drive-worthy, and serve the transit of pedestrians, public and private vehicles, motorcycles, bicycles and cattle.

On the other hand, the Catambuco pedestrian bridge is located on the Panamerican Freeway, which enables the transit of adults, youngsters and children going to school or needing to cross the freeway.





Image 5.3.72 Catambuco pedestrian bridge,  
Planar Coordinates, Origin Magna Colombia  
E 976300.783702423 N 620841.410109473  
Source (Géminis Consultores Ambientales S.A.S., 2016)

Mobility assessment for the villages which come into direct contact with the Rumichaca - Pasto road project,

Village of Vocacional - Rio Bobo:

The mobility assessment for this village is key, since it is located on the project's roadway; refer to the related charts and figures below:

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Image 5.3.73 Rio Bobo access -  
Planar Coordinates, Origin Magna Colombia  
N 906075,299 E 608563,977  
Source (Géminis Consultores Ambientales S.A.S, 2016)

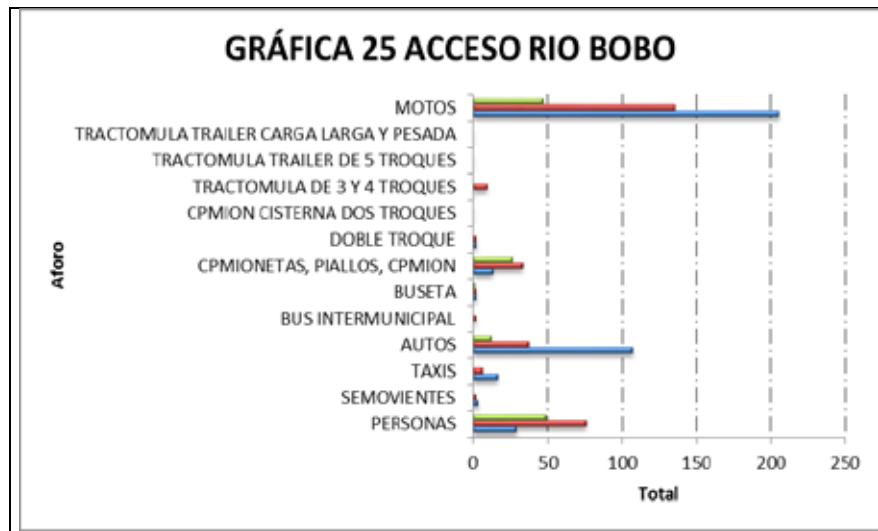


Figure 5.3.72 Access to Rio Bobo sector - April 26, 2016  
Source (Géminis Consultores Ambientales S.A.S, 2016)

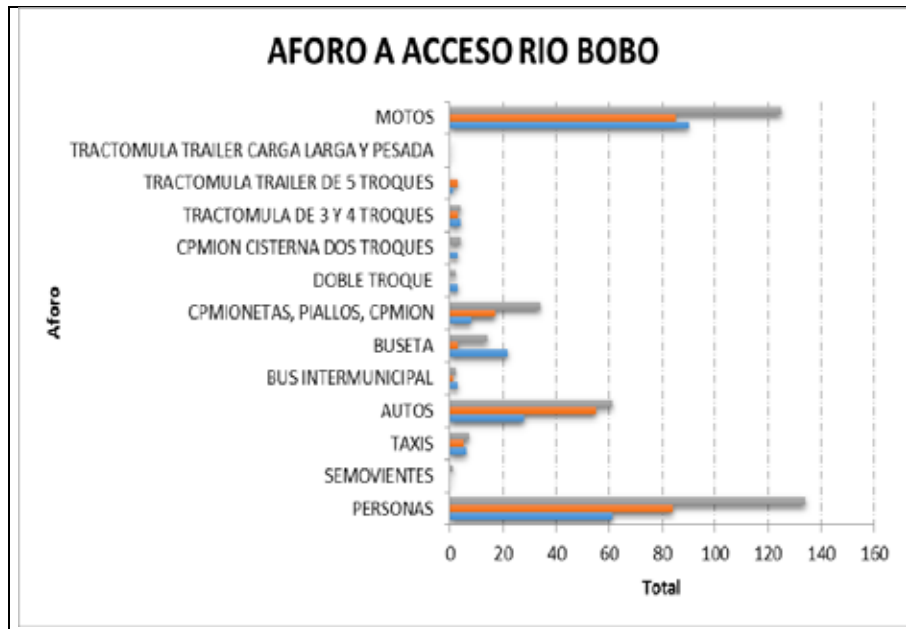


Figure 5.3.73 Measurement on the Rio Bobo sector, May 15

Source (Géminis Consultores Ambientales S.A.S, 2016)

Catambuco Centro:

The mobility assessment for this township is key, since it is located on the project's roadway; refer to the related charts and figures below:



Image 5.3.74 Access to Catambuco in the Municipality of Pasto.  
Planar Coordinates, Origin Magna Colombia  
E 975556,804 N 619965,819  
Source (Géminis Consultores Ambientales S.A.S, 2016)

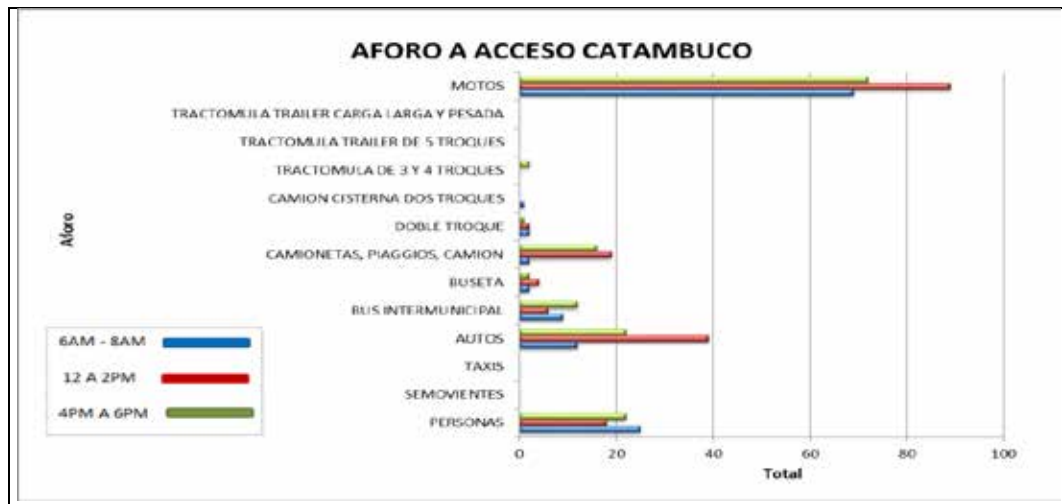


Figure 5.3.74 Reference chart from May 28, 2016  
Source (Géminis Consultores Ambientales S.A.S, 2016)

With regards to mobility, measurements were taken on May 28, 2016, on the access roadway to the township of Catambuco, which borders with the project's area of influence and also serves as the gateway to the villages of Gualmatán Alto, Vocacional and Huertecillas. The aforementioned measurements showed that traffic during the three time frames measured was mostly comprised by motorcycles, followed by cars

and pedestrians. Traffic of piaggios, trucks, pick-up trucks, large and smaller buses, and semis happens at a lower frequency. Therefore, our conclusion is that if a change were to be introduced as part of the project's implementation, the biggest impact would be on motorcycle traffic. See annex 5.3.3c

### Facilities

The villages have well classified chapels in good and fair repair, where religious events are attended by most residents; this with the exception of the villages of Gualmatán Alto, Vocacional and Fray Ezequiel, that have no communal facilities whatsoever and, thus, their residents must travel to nearby villages to participate in such events.

It is worth noting that Catambuco has the Nuestra Señora de Guadalupe Church, a sacred place for the township's and nearby municipalities' residents; the patron saint's celebration is held on December 12, in honor of the Virgin of Guadalupe, a festivity that summons the inhabitants from all the communities in the sector and the neighboring communities.

Nuestra Señora Church - Planar Origin Magna 975308.002 N Source (Géminis Ambientales



Image 5.3.75 de Guadalupe Catambuco, Coordinates, Colombia, E 620720.296 Consultores S.A.S, 2016)



Image 5.3.76 Chapel in Huertecillas,  
Planar Coordinates, Origin Magna Colombia  
E: 974490,156 N: 621695,528  
Source (Géminis Consultores Ambientales S.A.S, 2016)  
See Annex Table 5.3.3.b, Social Infrastructure Minor LUs.

In conclusion, a significant gap can be evidenced in all minor land units in each municipality between urban and rural spaces, although the greater part of the population is living in the rural areas.

The greatest deficit is regarding the coverage in public utilities and social services; some companies providing services such as sanitation, sewage, telecommunications, internet and transportation are present in these sectors with infrastructure that provides limited coverage when attempting to cover the rural segments, which has led to residents, whose basic needs are not being fully met, using traditional tools which are harmful for the environment and for themselves. The shortcomings in coverage often times are due to issues with accessibility, because of the lay of the land, or the high investment that would be required, among other factors.

However, it is important to highlight the way in which rural communities have made proper use of water resources obtained from natural sources; residents have adapted water flows through village aqueducts organized by local management boards jointly with the other residents, who use these resources for domestic consumption, thus fulfilling one of humanity's most basic necessities.

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ENVIRONMENTAL IMPACT EVALUATION FOR THE RUMICHACA - PASTO DOUBLE-LANE PROJECT, PEDREGAL - CATAMBUCO SECTION, UF. 4 AND UF 5.1., CONCESSION AGREEMENT UNDER THE PPA NO. 15 OF 2015

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### 5.3.4 Economic component

The economic structure in most Colombian regions and especially in the Department of Nariño revolves around the natural production and growing of products, not only as a primary or raw material, but also to some extent as processed products. However, there is a very low degree of sophistication in terms of product transformation.

According to the document dubbed "Economía del Departamento de Nariño" (Economics of the Department of Nariño), a publication by the Colombian Central Bank, the agricultural activity continues to serve as the economic foundation for Nariño, as it contributes one third of the department's product, as well as a considerable percentage of its exports. (Hoz, 2007) Therefore, agriculture and cattle farming have been the economic foundation for the Department of Nariño, essentially a rural region where small farming is the norm.

In order to conduct the assessment of this component, several specific aspects were defined that characterize the economy of the major and minor land units, such as the land ownership structure, productive and technological processes, the characterization of the labor market, areas driving development, commercial structure, marketing and sales networks, productive companies of the primary, secondary and tertiary levels.

After completing the analysis of this dimension, we will conduct a comprehensive analysis of the area of influence, highlighting some trends.

#### 5.3.4.1 Major land units

In the context of Nariño's economic development, there are municipalities or major land units in the area that will be under the influence of the Pedregal - Catambuco sector of the Rumichaca - Pasto double-lane roadway project, whose economic structure is similar to the rest of the Department's.

#### Functional Unit 4

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Municipality of Imués

The economic characteristics of the Municipality of Imués are as follows:

**Land ownership structure:**

"96.23% of the lands in the Municipality of Imués are smaller than 7 hectares, accounting for a total area of 3,203 hectares, and 44.18% of the total area in this territory; 2.97% of the lands in the Municipality are between 7 and 20 hectares big, accounting for a total area of 2,098 hectares and 28.94% of this municipality. Barely 0.8% of the lands in the Municipality are larger than 20 hectares in size, which accounts for 1,949 hectares and 26.88% of this territory; this serves to confirm that the prevailing agricultural system is based on small and mini-farms". (Imués, Alcaldía Municipal, 2012)

The economy of the Municipality of Imués is based on a productive structure that focuses on agricultural activities, characterized by "small farming, rudimentary production, by the use of family labor and scarce use of technology, with the result being a low yield from the crops". (Imués, Alcaldía Municipal, 2012).

The small family-owned farms have been divided and sub-divided because of inheritance processes or the sale of the lands, and this has resulted in low yield, low-profitability agricultural exploitation which is barely enough to satisfy the barest necessities of a peasant family.

**Productive and technological processes**

The economy of the Municipality of Imués is based on agriculture; however, and given the complex topography of the region, the impact erosion has over the land, and its dryness, the total area dedicated to these activities has been reduced. Over the course of several decades and as a result of weather conditions and height, the main product was wheat; at this time, it has been replaced by corn, peas and beans, as well as by fique, tree tomato, barley, potatoes, manioc, cabbage, cherimoya, guava and white onion. All farming and harvesting processes still follow traditional methods using oxen for plowing with some use of tractors; there is no technology or collection centers.

In the Municipality of Imués the economy revolves around agriculture, especially in the production of cereals such as wheat and barley; cattle farming is carried out in a

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traditional and non-technical fashion. Wheat and corn are predominant in the middle portion with its cold and dry weather and broken landscape, while bean crops are more predominant in the lower portion with its warmer weather. The cold, humid hillsides have a poor moisture retention, and grasslands are more abundant there.

The scarcity of water throughout the land makes it imperative to build irrigation districts in order to foster the development of the agricultural sector.

Bovine cattle farming plays a dual role (milk and meat production), the products of which are sold and traded at town fairs in the municipalities of Túquerres and Pasto, in Nariño. Cheese is sold through intermediaries and serves as a source of additional revenues for farmers.

The region has some poultry farming facilities with a moderate level of technology, along with others with traditional production techniques; the production of chickens is sold in Pedregal and in some restaurants in Pasto.

Growing and marketing of other animal species such as guinea pigs, rabbits, horses, sheep and buffalo can be seen in the Municipality of Imués; production is traditional, with very little technology and labor provided by the family; production is mostly used in self-consumption, or sold at local markets with any surplus being sold directly to the restaurants in Pinzón (Túquerres), El Charco, Ipiales and Pasto.

#### Characterization of the current labor market

Agricultural production is the main source of revenue since such activities require a large amount of labor (provided by the family itself), especially from male relatives for activities such as plowing, raking, pest and disease control, as well as the packaging and transportation of products.

The primary source of employment is the Municipal government which is the main contractor of skilled and unskilled labor for public works, and for the implementation of operational and social investment resources.

"The economically active population, that is those between 15 and 59 years old is mostly focused in the municipality's rural areas, and work in agricultural production and animal farming". (Imués, Alcaldía Municipal, 2016 )

Development poles and/or enclaves interacting with the area influenced by the component, the group of components or the environment.

According to the main weather characteristics, and the scenic beauty of some of its villages, the Municipality of Imués has a potential for tourism which is reflected by the growing number of leisure and recreational establishments that have been opened in the area, as well as by the construction of summer or holiday homes.

Furthermore, visitors practice boating and rafting along with other extreme sports. Jointly with the unique mountain landscapes which include the Guáitara Canyon these features make the Municipality of Imués very attractive and provide a potential for tourism development.

The fact that the country has invested heavily in supporting the development of tourism, fostering its consolidation and strengthening, comes in response to the acknowledgment that this sector is a driver of work and revenue opportunities, contributing to the improvement of the living conditions for local communities. This can only be achieved if the tourist destination is managed responsibly, with proper knowledge and expertise, and with proper continuity in the actions being undertaken. That is to say, if there is articulation with the tourism development plan for the Department of Nariño, and supported by Colombia's Tourism Promotion Fund.

#### Commercial Structure, Sales and Marketing Networks

The limited agricultural production generated by the Municipality of Imués is sold to brokers and intermediaries, as there is no collection center which allows farmers to sell their products directly to end consumers. Therefore, the sales and trading structure is at its bare minimums, with a very poor supply that fails to foster the establishment of commercial networks in the municipality.

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"The residents of the urban section and of Pedregal, Santa Rosa and Santa Ana, are mostly merchants, trading in goods and services through small stores, supermarkets, stationery stores, restaurants, drugstores, fast food restaurants, hardware shops, clothing and shoe stores, among other types of small businesses". (Imués, Alcaldía Municipal, 2016 ).

The Municipality's rural population uses the back-roads to transport their agricultural products on horseback, transferring them later onto small vehicles for transport down to the local and regional markets. The population living by the side of the road currently sells their fruits, such as guava, cherimoya and oranges, in these areas.

Productive companies and businesses in the primary, secondary and tertiary sectors.

In the Municipality of Imués the economy is mainly based on the primary sector, revolving around agriculture, especially the production of cereals such as wheat and barley; cattle farming is carried out in a traditional and non-technical fashion. "The secondary sector, which accounts for 8.4% of the establishments is dedicated to industry; 37.9% to sales and trade; 43% to services and 10.7% to other activities". (Imués, Alcaldía Municipal, 2012).

"Industrial activities in Imués are very limited; there is an Association of Figue Workers in Santa Ana, comprised by 255 members. There is a milk cooling plant with capacity for 350 liters per day, along with 7 family companies dedicated to the production of a farmer's type of cheese, that is produced using traditional methods. Santa Ana has 3 tileworks facilities with an oven/furnace which produce bricks; this production is done using wood and an electrical motor to grind the earth; there is an immediate requirement for intervention in order to ensure that these families will switch to using gas- or coal-powered ovens, in order to prevent the cutting of trees and further environmental damages". (Imués, Alcaldía Municipal, 2016 )

Mining extraction takes place in Santa Clara, Pilcuan and Pedregal, with rock extraction and crushing. See Image 5.3.92

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Image 5.3.77 Rock crushing plant in the Municipality of Imués  
Planar Coordinates. Origin Magna Colombia West N 604086,278 E 955077,737  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

Commercial activities are mostly carried out within the urban parts of the Municipality of Imués, in Pedregal, Santa Rosa, Pilcuan and Santa Ana, in the form of small stores, supermarkets, stationery stores, restaurants, drugstores, fast food restaurants, hardware shops, clothing and shoe stores, among others.

The Municipality of Imués has 11 productive associations of producers for the provision of different services, agricultural and animal farming production, which require institutional support in order to grow stronger and to fulfill their social purpose.

Municipality of Yacuanquer

Land ownership structure:

"Land ownership and distribution is mainly defined by small farms, which provide a basic productive structure mainly characterized by a family orchard with production based on a peasant economy, for self-consumption with the sale of any surplus. Usually this structure is used for subsistence farming (with the growing of vegetables, corn,

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beans, potatoes) with great involvement by the family. Most of the lands are acquired through inheritance processes, but without any legal registration of the ownership of the plots; they are commonly held without any clear deeds, purely based on purchase and sales agreements, or simply by holding the land over time. There is, therefore, a large number of plots and estates being held through false tradition, which becomes a significant limitation when it comes to implementing legalization proceedings." (Yacuanquer, Alcaldía Municipal, 2016 ).

"In the Municipality of Yacuanquer it is estimated that 43.66% of properties are less than one hectare in size; this accounts for 1,428 plots; 36.9% are within 1 and 5 hectares, equivalent to 1,207 plots; 8.65% are between 5 and 10 hectares in size, which account for 283 properties, 4.65% are between 10 and 15 hectares, 5.11% are between 15 and 50 hectares, and 1.03% are larger than that". (Yacuanquer, Alcaldía Municipal, 2014) This information confirms that the current land ownership and distribution in Yacuanquer, as with most of the Department of Nariño, has been strongly influenced by the historic processes that have allowed for large extensions of land to be held by very few owners, while small farms are the norm among the rest of the population. This is reflected in the following table.

Table 5.3.27: Land Ownership and Distribution in the Municipality of Yacuanquer

Hectares	Number of properties	Relative share
Less than 1.	1.428	43.66%
1 – 3	954	29.17%
3 – 5	253	7.73%
5 – 10	283	8.65%
10 – 15	152	4.65%
15 – 50	167	5.11%
50 – 200	28	0.86%
200 – 500	5	0.15%
Over 500	1	0.03%
Total	3271	100 %

Source: 2014-2027 Zoning Scheme for the Municipality of Yacuanquer

### Productive and technological processes

The agricultural sector has consolidated its position as the main source of employment and revenues. Corn is the type of crop most commonly found in the municipality, and the one with the largest planted area. In cold weather, this crop is used as subsistence farming, with over 70% of its production being used for human consumption and for feeding minor stock such as chickens and hogs; 15% is sold as sweet corn, and the remaining 15% is left to be used as seeds. The crop's cycles are long, with low yields which, in addition to the poor weather conditions, have led producers to seek other options.

Bean crops support over 600 families, since only 10% of the yield is used for self-consumption, 10% for use as seeds, and 80% is sold. The technology used is almost non-existent, which results in productions of 1000 k/Ha, which is sold to brokers and intermediaries.

Coffee is grown in the rural areas of 10 villages in the Municipality with a yield of 1200 k/Ha. The Coffee Growers Cooperative is located in the urban part of the village, which buys from 70% of the farmers, while the remaining 30% sells to brokers and intermediaries. The limited investments in proper technologies as an adverse impact over the coffee production and drying, thus reducing the total yield.

Potatoes are grown in different varieties, and is used for self-consumption as well as sold. It demands high capital investments, and also generates work opportunities for the general population. "Up until 10 years ago, wheat was the top agricultural product in the municipality; however, and on account of high production costs and low prices, its production has dropped. In recent years, white onion crops have become more frequent, especially in the villages of Inantas Bajo and Inantas Alto, where there are irrigation systems in place". (Yacuanquer, Alcaldía Municipal, 2016 ). A large number of fruit crops have been planted, including lulo, orange, banana, strawberry, guava, lime, lemon and tangerine.

Vegetable production is done in house orchards using traditional technology and organic production. It is mainly aimed towards self-consumption, ensuring food stability at each household, although surplus produce is sold out.



Cattle farming activities report the existence of approximately 5,732 bovines used for dual purpose, they are fed at pastures, some with improved grass families.

The production of minor species shows that each rural come grows guinea pigs, rabbits, poultry and hogs for self-consumption as well as for sale to third parties and intermediaries. There has been an increase in the establishment of chicken and hog farms, causing discomfort to the nearby population due to the resulting foul smells and pollution. The farming of guinea pigs has a strong potential should production be made in mass, because it requires a relatively small investment, while generating a constant revenue flow, resulting from its short breeding period; this type of activity has a small footprint in terms of size, and is a clean production with very little contamination.

In the secondary economic sector, micro-companies are dominant, dedicated to the agro-industrial transformation of milk, coffee and wood, all of which show very limited technological resources in support of their productive processes.

The following institutions provide technological, scientific, financial, and marketing support, along with the distribution of agricultural supplies, and the provision of specialized agricultural services: ICA, CORPOICA, UMATA, FEDEGAN, SENA, the Universidad de Nariño, The Banco Agrario (Agricultural Bank), Agricultural stores, National Parks, and CORPONARIÑO.

The UMATA supports farmers in the handling of ancient crops such as quinoa and its uses as part of the family diet, and also provides assistance to small farmers in order to increase and improve their agricultural productivity and the breeding of minor species and bovines.

#### Characterization of the current labor market

"One of the main sources of employment in the municipality of Yacuanquer is public contracting, which includes all offices and bodies, as well as the agricultural sector, which includes 1,560 production companies. On their part, in urban areas the services and trade sub-sectors are the most meaningful although with a small number of employees per store since, according to DANE 2005, close to 98.7% of the

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establishments employed between 1 and 10 workers and only 1.3% employed over 10 workers". (Yacuanquer, Alcaldía Municipal, 2014).

The municipal administration has implemented Articulation processes with SENA for the training of technicians, who will receive their titles as such. Work was also carried out with Universities, specifically the Institución Educativa Pedro León Torres, which signed an agreement with the Universidad Mariana, for the implementation of technical programs. This will help train people to make them better qualified and more competitive, in order for them to have greater access to labor opportunities.

Development poles and/or enclaves interacting with the area influenced by the component, the group of components or the environment.

According to the 2012 - 2015 Departmental Development Plan dubbed "Nariño Mejor" (A Better Nariño), "the central sub-region will be a driver for the commercial development of Nariño's agricultural production, with the best roads in the Department, providing better quality of life for its residents, with the possibility to access high-quality education, housing and health services, while preserving the environment and protecting the micro-basins, with communities living in peace and with social awareness. This sub-region is located in the middle of the Department of Nariño, and is comprised by the municipalities of: Pasto, Nariño, La Florida, Yacuanquer, Tangua and Chachagüi". (Gobernación de Nariño - Plan de desarrollo departamental de Nariño, 2012 -2015) That is, the municipality of Yacuanquer is part of the central sub-region which, according to the departmental development plan, has the potential to become a focus and a driver for the commercial agricultural production in Nariño.

There is a direct correlation between the development of road infrastructure and the potential to become a driver for the commercial development of a region's agricultural production. Therefore, the construction of the Rumichaca - Pasto double lane roadway project, and the transformation of the third-level network would contribute to the fulfillment of the goals defined in the departmental development plan to transform the central sub-region, where the municipality of Yacuanquer is located, into a driver for development. "The National Council on Economic and Social Policy (CONPES) endorsed a document which sets forth the guidelines to transform the network of third-level roadways over the coming years. CONPES document 3857, which took into

consideration some of the suggestions made by the Colombian Infrastructure Chamber (CCI) can be considered as an important first step in improving the connectivity of rural areas. The above will be a key tool for the transformation of the rural areas and the consolidation of peace". (Cámara colombiana de Infraestructura, 2016).

#### Commercial Structure, Sales and Marketing Networks

"Yacuanquer's location is strategic, as it allows it to easily move its residents and market different products, given its ease of access and the closeness of production and consumption centers". (Yacuanquer, Alcaldía Municipal, 2016 )The selling of goods is done in Pasto, Ipiales and in the different villages within the municipality and its urban section. The products marketed and sold include mostly coffee, corn, peas, beans, wheat and cattle. Sunday is the day when markets are set up; products are sold to intermediaries, who then take them to other markets.

The municipal capital has a produce market; the municipality has no collection or storage centers which means that products must be sold with no added value.

Agricultural activities are carried out at a small scale, and production is mostly for self-consumption with surplus products sold in the local market. The small amounts produced have prevented any attempts to serve regional and national markets. (Yacuanquer, Alcaldía Municipal, 2014)

#### Productive companies and businesses in the primary, secondary and tertiary sectors.

In the Municipality of Yacuanquer the primary sector is based on three main activities, agriculture, animal farming, and mining; corn, beans, coffee, potatoes and wheat are the most common and noteworthy crops. The animal farming sub-sector includes the breeding of bovine cattle for dairy production, along with hogs and minor species such as guinea pigs and rabbits, mostly.

Some noteworthy agricultural associations include the Yacuanquer Association of agricultural producers, La Orquídea farmers' association, the Asociación Agroecológica Nuevas Raíces, Asoagro Chapacual, among others.

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Illegal mining activities are present in the municipality, which have adverse impacts on the social, economic and environmental dimensions. There are eight mines, which generate approximately 24 direct jobs. Conflicts among neighbors are the result of underground invasions of the properties of others, damages caused to roads in public access sectors, and for damages to infrastructure works.

On the other hand, fish farming of the following species is also present in the sector: trout, red and black tilapia, although with low production figures and insufficient technical resources.

"In the municipality of Yacuanquer the secondary sector is one of the least developed, according to DANE 2005 industry accounts for only 7% of all prevailing economic activities in the municipal capital". (Yacuanquer, Alcaldía Municipal, 2014) This is a key factor in order to promote the diversification of consumption, the classification and the preservation of products coming from the agricultural sector. Few examples can be seen in the urban area of the municipality, with the production of french fries and home-made noodles.

The tertiary sector is the most important one for the economy of the urban segment of the municipality of Yacuanquer; it includes informal commercial activities such as grocery stores, pottery shops, agricultural and clothing stores. In terms of services, financial and transportation services are the most noteworthy. Public passenger transport services are provided by companies such as Transandoná, Rutas del Sur y Pasto.

#### Municipality of Tangua

#### Land ownership structure:

The Municipality of Tangua shows a coexistence of small plots along with medium and larger properties, with the latter accounting for the smallest percentage.

Thus, small farms is the norm with the highest percentage, at 43.46% for plots smaller than 1 hectare, 29.58% for properties between 1 and 2 hectares and 12.91% for farms

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between 3 and 5 hectares; therefore, small farms account for a total of 85.95%; medium sized farms between 6 and 10 hectares in size account for 6.35% of the land distribution and those between 11 and 20 hectares represent 4.54%, and those between 21 and 50 hectares are equivalent to 2.29%, while great extensions (greater than 50 hectares) account for 1.8% of the municipality's total area; this means that most farmers in the Municipality of Tangua are living in precarious conditions; the size of their plots and lands, and a trend towards further atomization prevent a profitable use of supplies and capital-intensive technological processes, thus driving up costs and hampering competitiveness by the main products generated in the farming economies. (Tangua, Alcaldía Municipal, 2008)

With a marked abundance of small farms, farmers only have sufficient resources to meet the needs of their own families and their personal production; therefore, they must seek other work alternatives in order to generate an income that is sufficient to allow them to feed the family.

#### Productive and technological processes

The main economic activities in the Municipality of Tangua include agriculture, cattle farming, and sand extraction, all of which carried out following traditional methods with very little technical resources; producers lack the modern and proper knowledge that would allow for better conditions. As a result of this, farmers only make a subsistence income, predominantly marked by small plots of land where peasants have only basic resources which barely allow them to satisfy their family's and production's needs. Wheat, corn, peas, beans and potatoes are the main agricultural products in the municipality.

In terms of animal breeding, cattle farming is the predominant activity, mostly dedicated to dairy production, with a dominance of Holstein cows and steers, along with their corresponding mixes. The exploitation and farming of minor species focuses mostly in hog farming, laying poultry, guinea pigs and rabbits.

The breeding of bovines for milk and beef production, as well as poultry for eggs and meat is carried out fully using traditional methods. Hog production is done 90% under

the traditional system, and 10% with technological support; the proportion of traditional to technical in guinea pig production is 95%/5%.

There are some cases where groups of farmers have achieved economic stability because they have the necessary resources to meet their family and productive needs, although even they experience significant capital limitations when attempting to modernize their production in terms of technology, in the management of market conditions, in access to credits and loans, and in terms of the knowledge that would allow them to properly satisfy their needs.

#### Characterization of the current labor market

The population in the Municipality of Tangua is made up by 51.65% men and 48.35% women, which have mostly entered the local labor market, especially working in agricultural activities. Therefore, in agricultural production 50% of the monies paid for planting and harvesting activities are performed by women, with a higher percentage of involvement being evidenced in the animal farming segments, where they account for 98.33% of all producers. On the other hand, children under 10 years old in rural areas also participate in the productive processes, performing activities such as running errands and assisting in caring over animals. (Tangua, Alcaldía Municipal, 2008).

In agricultural activities associated work is only carried out by approximately 2% of the rural population; that is, communal work shows a significant reduction in its access to programs by government institutions, which mainly limits the ability to access resources and improve the quality of the production. The above is reflected in a reduction in agricultural credits and loans, investment and rural production.

Development poles and/or enclaves interacting with the area influenced by the component, the group of components or the environment.

According to the 2012 - 2015 Departmental Development Plan dubbed "Nariño Mejor" (A Better Nariño), "the central sub-region will be a driver for the commercial development of Nariño's agricultural production, with the best roads in the Department, providing better quality of life for its residents, with the possibility to access high-

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quality education, housing and health services, while preserving the environment and protecting the micro-basins, with communities living in peace and with social awareness. This sub-region is located in the middle of the Department of Nariño, and is comprised by the municipalities of: Pasto, Nariño, La Florida, Yacuanquer, Tangua and Chachagüi". (Gobernación de Nariño - Plan de desarrollo departamental de Nariño, 2012 -2015) That is, the municipality of Tangua is part of the central sub-region which, according to the departmental development plan, has the potential to become a focus and a driver for the commercial agricultural production in Nariño.

There is a direct correlation between the development of road infrastructure and the potential to become a driver for the commercial development of a region's agricultural production. Therefore, the construction of the Rumichaca - Pasto double lane roadway project, and the transformation of the third-level network would contribute to the fulfillment of the goals defined in the departmental development plan to transform the central sub-region, where the municipality of Tangua is located, into a driver for development. "The National Council on Economic and Social Policy (CONPES) endorsed a document which sets forth the guidelines to transform the network of third-level roadways over the coming years. CONPES document 3857, which took into consideration some of the suggestions made by the Colombian Infrastructure Chamber (CCI) can be considered as an important first step in improving the connectivity of rural areas. The above will be a key tool for the transformation of the rural areas and the consolidation of peace". (Cámara colombiana de Infraestructura, 2016).

### Commercial Structure, Sales and Marketing Networks

The marketing and sale of productions in the Municipality of Tangua is influenced by agents such as the transport, storage and classification of agricultural products, which are controlled by individuals or companies with power within the Municipality, thus affecting producers and consumers, as they keep the larger part of the benefits, imposing prices that are incompatible with the production costs.

End consumers of the main crops produced in the Municipality of Tangua live in Pasto, and the brokerage process involves traders from the municipalities of Yacuanquer, Funes and Ipiales. The marketing and sales process is carried out in other villages in the municipality; producers sell their products to intermediaries at very low prices, since the municipality lacks a collection center and no value is added to the product.

In terms of the marketing and selling of agricultural products, the municipality is in need of proper maintenance and repair of third-level roads, which would aid in cutting down transportation times and costs.

Roadside economic activities are observed in the Municipality of Tangua, such as gas stations, restaurants, coffee shops, stores, tire repair and brickworks, such as the one below. See Image 5.3.93:





**Image 5.3.78 Brickworks in Cebadal - Municipality of Tangua**

Planar Coordinates. Origin Magna Colombia West E 966308, 174 N 615016,7382

Source (Géminis Consultores Ambientales S.A.S, 2016)

A total of 23 social productive units and 8 mixed social units were identified in the Municipality of Tangua, on the sides of the Pedregal - Catambuco road. Mixed units are those where economic activities are carried out from home.

Productive companies and businesses in the primary, secondary and tertiary sectors.

According to the Zoning Plan for the Municipality of Tangua, the following establishments operate in the urban area, mostly family businesses employing two family members at the most. See Table 5.3.36

**Table 5.3.28 Source Commercial and Services Establishments - Urban Area Municipality of Tangua**

Type of Establishment	Amount
Stores	18
Granaries	3
Restaurants and Rotisseries	5
Barber Shops	3
Leisure Centers	9
Electro-Mechanical Repair Shops	3
Tailors	1
Health Services	3
Wood Shops	1
Corner Stores	1
<b>Total</b>	<b>47</b>

Source 2008 - 2011 Tangua Zoning Plan



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ENVIRONMENTAL IMPACT EVALUATION FOR THE RUMICHACA - PASTO DOUBLE-LANE PROJECT, PEDREGAL - CATAMBUCO SECTION, UF. 4 AND UF 5.1., CONCESSION AGREEMENT UNDER THE PPA NO. 15 OF 2015

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Functional Unit 5.1

Municipality of Pasto

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**Land ownership structure:**

"In the rural areas, families make their income from agricultural activities, with an varying level of satisfaction of their needs; the most predominant forms of production are small scale operations, given the lack of land (plots usually smaller than 1 hectare) and capital, which result in divisions of the land (lotting system). Rural poverty is worsened by marginalizing geographic conditions, social exclusion and the high cost of the base consumer products". (Pasto, Alcaldía Municipal , 2014).

This results in a subsistence economy, where farmers sell a part of their products in the local markets, with a high degree of intermediation and brokerage that cuts into their revenues and profits. A significant part of this issue is associated to the high degree of concentration in land ownership, thus focusing wealth around a small percentage of the population.

With regards to land ownership, there is a standing problem with the formalization of the plots; possession of the land is based on a figure of false tradition (with no legal deeds), which limits access to credits and loans. Farmers cannot access rural housing programs, because one of the requirements for it is to have a proper legal hold over their land.

**Productive and technological processes**

The most common crops in this region are potatoes and carrots. They have shown a relative stability in terms of production figures. Yellow potatoes are a type temporary crop, which comes third in level of importance.

The secondary sector shows a similar behavior than the agricultural primary sector, in terms of its contribution to the municipal economy, as reflected in the scarcity of productive and transformation infrastructure; this situation has driven intermediation and brokerage activities, which results in a scarcity of resources for the productive segment.

The manufacturing activity is comprised by micro- and small-businesses, along with some middle-sized ones. A high percentage of these companies have limited capital resources, lack any significant level of technology, and remain informal because they are driven by subsistence.

"The Colombian Association of Small Industries - ACOPI has 64 tanneries on record, of which 22 are located in the city of Pasto; their production levels are low, and have exhibited difficulties to maintain quality standards, and have a very poor technological development. (Alcaldía de Pasto, 2015)

#### Characterization of the current labor market

"During 2015 the Municipality of Pasto had an unemployment rate of 9.2% (17,480 individuals), a figure that is above the national average of 8,0%; the Municipality also has one of the highest labor informality rates in Colombia, of about 61,0%; it concentrates 83% of the jobs in the Municipality; however, there are sectors that see informality as a source of revenue; situations such as moto-taxis, coal workers and a population working in animal-driven carts, among others, are considered for labor and productive reconversion processes". (Pasto, Alcaldía Municipal, 2016 ).

In the rural areas there are no activities generating sufficient jobs for the population. Agricultural activities usually undergo strong fluctuations, are not permanent, and are dependent on the planting and harvesting seasons; also, mostly family labor is employed. The abandonment of the rural sector has resulted in undeveloped opportunities for the agricultural segment, and a lack of value added to production.

"In the context of the economy of the Municipality of Pasto it remains evident that its main economic characteristics revolve around the dynamics of the tertiary sector, with informality being quite predominant, along with low quality jobs and a high level of unemployment; mainly in the younger population, especially women". (Universidad de Nariño, 2012)

The current labor market in the Municipality of Pasto is characterized for its cyclic unemployment typology. Given the strong dynamics of the trade and commercial sector, compared against the weak manufacturing industry, it is possible to ascertain

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that a good part of the cyclic economic conditions can be explained by the periodical contraction of commercial activities which is derived also, from a reduction in consumption. (Universidad de Nariño, 2012)

According to the 2012 Network of Regional Observatories for the labor market, during the 2005 - 2010 period the working-age population was comprised by 52% women, and 48% men. This slightly higher figure by women would explain the fact that during this period women accounted for the higher percentage of people actually employed. The important thing to bear in mind is the significant involvement by women in the labor market, which has been happening over time. This can be explained by the demographic change in gender, while also drawing the attention of policy-makers over the significant female presence in the labor market.

"For the second quarter of 2015, estimates by DANE regarding the city of Pasto are that out of a total population of 364,974 residents, 82.38% are of a working age (300.691). Furthermore, the Economically Active Population, also known as the labor force, is equivalent to 202.819 residents, that is, there is a global participation rate of 67.45%; employed and unemployed population figures are 89.98% and 10.02%, respectively". (Cámara de Comercio de Pasto, 2015)

Development poles and/or enclaves interacting with the area influenced by the component, the group of components or the environment.

According to the 2012 - 2015 Departmental Development Plan dubbed "Nariño Mejor" (A Better Nariño), "the central sub-region will be a driver for the commercial development of Nariño's agricultural production, with the best roads in the Department, providing better quality of life for its residents, with the possibility to access high-quality education, housing and health services, while preserving the environment and protecting the micro-basins, with communities living in peace and with social awareness. This sub-region is located in the middle of the Department of Nariño, and is comprised by the municipalities of: Pasto, Nariño, La Florida, Yacuanquer, Tangua and Chachagüi". (Gobernación de Nariño - Plan de desarrollo departamental de Nariño, 2012 -2015) That is, the Municipality of Pasto is part of the central sub-region which, according to the departmental development plan, has the potential to become a focus and a driver for the commercial agricultural production in Nariño.

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There is a direct correlation between the development of road infrastructure and the potential to become a driver for the commercial development of a region's agricultural production. Therefore, the construction of the Rumichaca - Pasto double lane roadway project, and the transformation of the third-level network would contribute to the fulfillment of the goals defined in the departmental development plan to transform the central sub-region, where the Municipality of Pasto is located, into a driver for development. "The National Council on Economic and Social Policy (CONPES) endorsed a document which sets forth the guidelines to transform the network of third-level roadways over the coming years. CONPES document 3857, which took into consideration some of the suggestions made by the Colombian Infrastructure Chamber (CCI) can be considered as an important first step in improving the connectivity of rural areas. The above will be a key tool for the transformation of the rural areas and the consolidation of peace". (Cámara colombiana de Infraestructura, 2016).

#### Commercial Structure, Sales and Marketing Networks

From an agricultural perspective, the Municipality of Pasto's contribution to wealth is losing its importance. It is worth noting that this sector is experiencing significant difficulties related to the loss of value of traditional products in a market that is under increasing globalization; many families have left their rural homes in search for better opportunities in the cities, without ever achieving a dignified lifestyle for their members; there is a strong focus on production and sales, but not on marketing; the level of corporate organization is quite low, with a trend towards individuality rather than the search for sector-based competition.

Commercial establishments focusing on the production of clothes, furniture, baskets, leather works, bakery and dairy products, are exposed to domestic and international competition by chains with a strong integration between production and sales, that are present on all channels, such as malls and corner stores". (Pasto, Alcaldía Municipal , 2014).

This situation is made worse on account of an insufficient infrastructure and the present state of roadways, which increases the times for product delivery, thus preventing their commercialization.

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There are official public markets in the Municipality of Pasto: marketplaces such as El Potrerillo, El Tejar, Los Dos Puentes, as well as mobile farmer's markets which are set up in different spots in the city. These spaces allow for the selling of products brought from the rural parts of the Municipality of Pasto, and for the urban population to be supplied with agricultural products. It is in those markets where unprocessed products are received, packaged, stored and distributed. The marketplace dubbed El Potrerillo provides close to 2,659 jobs of which 78% are held by women heads of households; there are also occasional job opportunities and workers performing ancillary activities (carrying of goods, drivers/pushers of human- and animal-driven carts, etc.). The marketplace is open every day of the week.

Sellers in produce markets are divided into retailers and wholesalers, which show a differentiated concentration. There are street vendors who take position on transit or pedestrian spaces, and are mostly children (boys and girls).

"The selling of products in some cases is done directly at the rural areas in the townships where production is carried out, and products are then collected in the village with traders and merchants acting as both wholesalers and retailers. The product redistribution rate is 89% from their access to produce markets down to the final sale to the end-consumer". (Alcaldía de Pasto, 2015)

The comprehensive strengthening of the produce markets is one of the conditions required to ensure the proper provision of marketing and sales services for agricultural products, in addition to becoming a strategy to dignify work increase revenues, recover public spaces, reduce security threats and improve the environment; to that extent, the strategic project to provide quality services in produce markets, has been developed to fulfill this purpose.

Given the small volumes, the quality of their products, and the poor state of repair of access roads to the main markets in rural areas, vegetable producers market their products from their own farms; this situation is influenced by a small number of agents who end up acting as wholesale intermediaries.

Potato sellers have indicated that prices are defined by intermediaries and, to a lesser extent, by producers. There are micro-companies with low production levels, using traditional manufacturing technologies. The difficulties in selling and marketing are

the result of fluctuating prices, with poor marketing conditions preventing the achievement of higher margins for producers. The link between producer and intermediary is done through direct transactions at the farm.

Five different stakeholders participate in the marketing of scallion: Retail producer and seller, external intermediary wholesaler, intermediary wholesaler, intermediary retailer and end-consumer. One of the biggest problems is marketing.

Currently, roadside productive units can be found which, over time, have become an alternative in terms of revenue generation in order to improve the income of the people living in human settlements located on the right of way or the side of the road along the corridor by leveraging on vehicular traffic to offer their products. Economic activities include restaurants, coffee shops, gas and service stations, the sale of arts and crafts products, tire repair stations and the sale of dairy products. See Image 5.3.94



Image 5.3.79 La Victoria Dairy - Municipality of Pasto  
Planar Coordinates Origin Magna Colombia West  
N 618726,7451 E 970769,782

Source (Géminis Consultores Ambientales S.A.S, 2016)

A total of 14 social productive units and 14 mixed social units were identified in the Municipality of Pasto. Mixed units are those where economic activities are carried out from home. The conditions under which some of these economic activities are carried out are not the adequate, as evidenced by this roadside carpenter's shop. Image 5.3.95

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Image 5.3.80 Carpenter's shop in Cubiján - Municipality of Pasto  
 Planar Coordinates. Origin Magna Colombia West  
 N 618155,238 E 973017,343  
 Source (Geminis Consultores Ambientales S.A.S., 2016)

Productive companies and businesses in the primary, secondary and tertiary sectors.

"The economy in the Municipality of Pasto is divided into three major economic sectors: primary, secondary and tertiary. The tertiary sector is the most significant, with a total contribution of 76% to the annual added value. During 2008 and 2010 there was an increase in the importance and contribution of the secondary sector, due to activities related to construction and real-estate services and house rental". (Alcaldía de Pasto, 2015)

The primary sector is comprised by the following sub-sectors: agricultural, animal farming, forestry and mining which, jointly, are the drivers of the sector's economic dynamics. "Agricultural activities in the primary sector in 2005 - 2010 contributed approximately 51%, followed by cattle farming activities, at 32%. Forestry has contributed an average of 13% annually. Other less significant activities include fishing and the exploitation of mines and quarries, with a 2% contribution, each. (Alcaldía de Pasto, 2015)

In the rural part of the Municipality of Pasto, the main sources of income are agriculture and cattle farming. According to the 2011 survey the population in the villages is

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predominantly female, commonly working in informal jobs and as day laborers; this population survives with less than minimum wages, but has good access to services on account of their closeness to the city of Pasto.

With regards to the primary sector of the economy in the townships, agriculture is the main source of revenue, with crops being grown in small plots of land which produce vegetables and other garden produce which are used for self-consumption and to supply the marketplaces in the city of Pasto, which strengthens their self-sufficiency. Currently, land use focuses mostly on agriculture (Municipality of Pasto, 2012 - 2015 Zoning Plan).

Intensive potato crops and grasslands are common in cold weather areas, with smaller crops of scallion and vegetables. "Potatoes are the main agricultural product in the Municipality of Pasto, with an average annual share of 72% between 2005 - 2010, followed by scallion, at 7%, carrots at 6%, cauliflower at 5%, cabbage at 4%, blueberry 2%, wheat 2%, fiqué 1% and corn 1%, on average. (Alcaldía de Pasto, 2015)

According to information from the Center for Regional and Enterprise Development Studies - CEDRE at the Universidad de Nariño, the manufacturing industry was deemed as the most competitive in the 2005 - 2010 period; however, it has lost some of its share since 2007. Weak industry conditions are among the most significant disadvantages in the sector. Economic globalization requires a strengthening of competitiveness levels, in order to allow for survival in the local and national markets.

Arts and crafts in the Municipality of Pasto are represented by: pottery, woodcarving, tamo decorations (a fiber taken from the stem of wheat), Pasto varnish, and leather embossing; this activity requires very little division of labor, low levels of specialization for production, fostering informality and low production levels. Considering that the region's handcrafted products are well known, there is significant opportunities to penetrate markets both domestically as well as abroad.

Activities in the secondary sector include companies working with products such as coffee (Café San Juan, Morasurco Café pure coffee), dairy (Colácteos, Lácteos Andinos), along with sand and gravel, located on the Catambuco - Jongovito road.

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The tertiary sector includes gastronomical establishments located on the Panamerican freeway, with stores located on the municipal capital, internet cafes, and other sundry services. The commercial and sales sector revolves around the main square and includes establishments such as restaurants, bars, hostels and cafeterias, which are a strong source of revenue for the local economy.

"The economy in the Municipality of Pasto is mainly driven by commerce and repair stores, followed by public administration, real-estate services and home rentals. Less significant are domestic and cleaning services. Commerce is comprised mostly by small establishments which generate direct jobs, strengthening the informal economy and usually located in the center of town, causing problems and obstacles on public streets. (Alcaldía de Pasto, 2015)

"The economic activities with the highest number of companies being created during the first half of 2015 were as follows: Vehicle Dealerships and Repair Shops (27.45%), with 56 companies, Professional, Scientific and Technical Activities (16.17%) with 33 companies established, Construction (13.72%) with 28 companies, Manufacturing Industry (9.8%) with 20 companies established, and Human Health and Social Assistance Activities (7.35%) with 15 companies". (Cámara de Comercio de Pasto, 2015)

#### 5.3.4.2 Minor land entities

The assessment of the economic component of the minor land units in the area of influence was carried out through field surveys, direct observation, the application of the village technical data sheets to community leaders identified, both from secondary sources, as well as through socialization meetings at the beginning of the environmental impact.

#### Functional Unit 4

The economic relations, structure, size, production distribution and local economic dynamics for the minor land units belonging to functional unit 4, as described in the characterization of the area under the project's influence, will be determined as follows:

#### Land ownership structure:

"Land ownership ranges provide an initial overview of land concentration in Colombia. Once the property sizes were defined, the percentage of cadastral area that each of those ranges represents was determined. Therefore, if the land distribution figures show a predominance of large and mid-sized plots, this would be a reflection that land ownership is highly concentrated. On the other hand, if land distribution figures show a predominance of small plots, the the country will have a more equitable distribution of property.

Below is the definition of each of the categories by property size range:

**LARGE:** plots with sizes in excess of 200 hectares.

**MEDIUM:** plots between 20 and 200 hectares in size.

**SMALL:** plots between 10 and 20 hectares in size. ((IGAC), 2016)

According to the information provided by community leaders, the land ownership structure in minor land units in the Municipality of Imués according to plot size, falls outside the categories previously mentioned as defined by the Instituto Geográfico Agustín Codazzi (IGAC), since according to the report based on the village data sheet, most of the properties are smaller than 5 hectares in size, which would mean that they would fall under the "small farms" characterization; such is the case of the properties located in the land units at Pedregal, Inantas Alto, Tablón Obraje, El Vergel and Buena Esperanza, where most properties are between 1 and 5 hectares in size; there were other cases identified where the prevailing areas of the properties are smaller than one hectare, in the minor land units at Pilcuán, Inantas Bajo, Cochaverde and the neighborhoods of Tangua Corazón de Jesús, Fátima and Bolívar. On the other hand, since at the San Pedro Obraje minor land unit most properties are between 5 and 20 hectares in size, this unit may be considered as small. See Table 5.3.37

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CATAMBUCO SECTION, UF. 4 AND UF 5.1., CONCESSION AGREEMENT UNDER THE PPA NO. 15 OF 2015

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Table 5.3.29 Land ownership structure in minor land units in functional unit 4.

Minor land unit	Type of property	Total village area (Ha)
Pilcuán	Small farm	496,52
El Pedregal	Small farm	423,91
Inantas Bajo	Small farm	333,43
Inantas Alto	Small farm	375,51
Cocha Verde	Small farm	183,99
El Tablón Obraje	Small farm	182,68
San Pedro Obraje	Small	365,46
Corazón de Jesús Neighborhood, Tangua	Small farm	84,49
Fátima neighborhood, Tangua		
Bolívar neighborhood, Tangua		
El Vergel	Small farm	257,56
Buena Esperanza	Small farm	264,23

Source (Geminis Consultores Ambientales S.A.S., 2016)

According to the information in the table above, 100% represents the 12 villages and/or neighborhoods in functional unit 4; according to the village data sheet, 11 of them, that is, 91.66% of the minor land units have properties whose range of sizes match those for small farms. In one of them, that is, 8.34% of the minor land units, plots are classified as small properties.

Types of land holders:

In the minor land units which comprise functional unit 4 the predominant form of land holding is as owners, followed by holders and lessees. The percentages in the table below are those reported in the village data sheet. "Under land holding, an individual



exercises the powers of a landlord over an assets that he does not own". (Mutis)See Table 5.3.38

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Table 5.3.30 Types of land holders in minor land units  
In Functional Unit 4

Minor land unit	OWNERSHIP (%)				
	Associative	Owner	Holder	Lease	Other
Pilcuán	-	87,5%	7,5%	5%	-
El Pedregal	-	95%	5%	-	-
Inantas Bajo	-	80%	10%	-	10%
Inantas Alto	-	100%	-	-	-
Cocha Verde	-	100%	-	-	-
El Tablón Obraje	-	100%	-	-	-
San Pedro Obraje	-	100%	-	-	-
Corazón de Jesús Neighborhood	-	80%	-	20%	-
Fátima Neighborhood	-	100%	-	0%	-
Bolivar Neighborhood	-	80%	-	20%	-
El Vergel	-	100%	-	0%	-
Buena Esperanza	-	100%	-	0%	-

Source (Géminis Consultores Ambientales S.A.S, 2016)

When ownership predominates, the right to decide on how the land is used becomes consolidated, be it for grazing, or to decide what crops should be planted, and to gain financial benefit from the sale of crops. The right to sell or mortgage land, to transfer it to others through inheritance, or to create a leasing or sharecrop mechanism that recognizes the right of the lessee or sharecropper to use the land under pre-established



conditions. The inhabitants of minor land units from functional unit 4 retain such rights, due to the predominance of the condition of ownership. See Figure 5.3.77

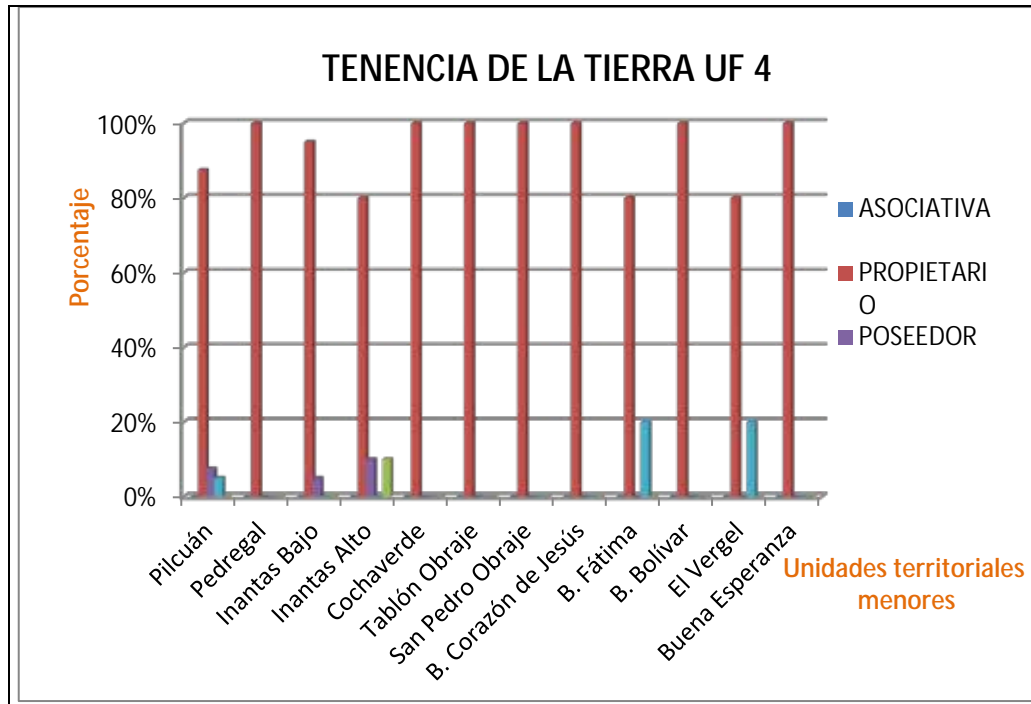


Figure.5.3.75 Types of land holders in minor land units in Functional Unit 4.

Source (Géminis Consultores Ambientales, S.A.S. 2016)

The fact that the predominant type of land holder is the owner and that, therefore, the holder is able to make decisions regarding the land, will make it easier to reach agreements during the project's execution, as well as to carry out the actions defined within the proposed management measures, whenever actions over the properties are required.

Now, with regards to land holding in this condition, the implementation of the project will not only maintain this situation but will even drive it further, since the actions to be carried out as part of the construction will always need to be framed in a context of legality.

### Land uses

According to the results of this assessment regarding functional unit 4, the distribution of the land uses is as follows: agricultural 70%, conservation 8%, urban 11%, transportation 6%, forestry 4%, industrial 1%.

According to the main economic activities carried out in the minor land units in functional unit 4, the land use in Pilcuán and El Pedregal is residential, commercial and agricultural. In Inantas Alto and Inantas Bajo, Cochaverde, El Tablón Obraje, San Pedro Obraje, Barrio Corazón de Jesús, Barrio Fátima, Barrio Bolívar, El Vergel and Buena Esperanza, land use is multiple residential and agricultural.

In the case of the minor land units in Inantas Alto and Inantas Bajo, their warmer weather and direct contact with the Panamerican freeway have made them attractive for settlement by families from Pasto, who use them for recreational and seasonal enjoyment during their holidays. Some of these properties include swimming pools.

### Productive and technological processes

The inclusion of technological processes is scarce, since residents dedicate part of their productive to subsistence agriculture with production being mainly used for self-consumption with the surplus being sold to the local market.

The main economic activity in the minor land unit of El Pedregal is commerce, followed by tourism and cattle farming. At Pilcuán the main economic activity is commerce, which has required no investments in technology.

Livestock production: Cattle farming is not considered to be one of the main activities in Pilcuán, Inantas Alto and Inantas Bajo. In the latter, poultry farming is ranked second in importance after agriculture. At Pedregal cattle farming is ranked third in terms of importance, after commerce and tourism. Cattle farming takes place in the following villages, ranked second in importance after agriculture: El Vergel, La Buena Esperanza, San Pedro Obraje. At Cochaverde and Tablón de Obraje, cattle farming is not ranked high in importance.

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In the minor land units in functional unit 4, cattle farming serves a dual-purpose production (milk and meat). Also, species such as hogs, guinea pigs, rabbits and chickens are raised, with commercial and self-consumption purposes.

Agricultural production. Due to the weather conditions in the minor land units of Pedregal, Inantas Alto and Inantas Bajo, agricultural production mainly consists of coffee, beans, and citrus fruits. In the minor land units in the Municipality of Tangua, the agricultural production of potatoes, beans, onions, peas, and coffee represents a significant percentage of the planted area.

Table Table 5.3.39 shows the main agricultural products and the planted area in each minor land unit, according to the information collected from the village data sheet. If the total number of hectares reported in it is taken as 100%, the percentage being used to grow each product in the minor land unit can be calculated. Therefore, in the minor land unit of El Pedregal the most commonly grown products are coffee and citric fruits, each representing 50% of the agricultural production in this village. The production of coffee grown in El Pedregal is for self-consumption; citric fruits grown there is for self-consumption and for sale in the village; this information is reported in the village data sheet as the main destination for the agricultural production.

In functional unit 4, beans and coffee are the products with the largest extensions planted compared to others, mainly in Pilcuán, Cochaverde and San Pedro Obraje; this is due to the climate characteristics of the villages where they are grown, which range from 10°C and 23°C. Other noteworthy products include peas and potatoes in colder climates, as well as grasslands.

Table 5.3.31 Agricultural products and planted areas in the minor land units in UF 4.

Minor Land Unit	Planted Area (Hectares)												
	Vegetables	Corn	Coffee	Beans	Peas	Citric Fruits	Onion	Grass	Potato	Wheat	Barley	Others	TOTAL
Pilcuán	-	8	22	15	2,2	-	-	-	-	-	-	-	47,2

Minor Land Unit	Planted Area (Hectares)											
El Pedregal	-	-	0,8	-	-	0,8	-	-	-	-	-	1,6
Inantas Bajo	-	1	20	80	-	-	-	-	-	-	-	101
Inantas Alto	-	-	10	6	-	-	15	-	-	-	-	31
Cocha Verde	1	5	15	20	5	1	-	8	-	-	2	57
El Tablón Obraje	-	4	5	35	3	-	35	-	-	-	-	82
San Pedro Obraje	-	-	50	50	4	-	-	-	1	-	6	111
Neighborhoods in Tangua	-	-	-	-	-	-	-	-	-	-	-	-
El Vergel	-	2	2	2	30	1	-	10	2	5	2	56
Buena Esperanza	-	7	-	6	8	-	-	25	12	-	-	58

Source: Village Data Sheet (Géminis Consultores Ambientales S.A.S., 2016)

The main onion-producing minor land units are: Inantas Alto, El Cebadal, Tablón Obraje.

In the minor land unit of Inantas Bajo, 79.3% of the planted area is used for growing beans, followed by coffee at 19.8%, with corn representing only 0.9% of the planted area. The agricultural production of coffee and beans is dedicated for self consumption and to be sold to intermediaries. Corn is used for self-consumption and for sale in the village.

In the minor land unit of Inantas Alto, the largest planted area is used for growing onions, at 48.4%, followed by coffee at 32.2%, and beans at 19.4%. In the minor land unit of Inantas Alto all products are used for self-consumption, sold to intermediaries and for local distribution in the village.

The most commonly grown products in the minor land unit of Cochaverde are: beans, 35.1% followed by coffee, at 26.4%, grass at 14.1%, corn and peas, each at 8.8%, with other products such as yucca, citric fruits, vegetables and others, at 6.8%. The following products are sold to intermediaries in Cochaverde: corn, coffee, beans and peas; all others are used for self-consumption. Of the two most important products in the village of Cochaverde, beans and coffee, the former is used for self-consumption and sold to intermediaries, while the second one is sold only to intermediaries. Citric fruits, grass and vegetables are used for self-consumption.

The minor land unit of Tablón Obraje produces mainly beans an onion, each with 42.7% of the production share, followed by coffee with 6.1%, corn with 4.9% and peas with 3.6%. Beans and onions are sold through intermediaries; all others are either used for self-consumption or sold to intermediaries. Based on the number of hectares planted, agriculture is the activity that is providing the most income to the residents of this village.

In the minor land unit of San Pedro Obraje the most commonly grown agricultural products are coffee and beans, with the same number of hectares, each representing 45% of the total area planted in the village, followed by peas with 3.6%, potato with 1% and other crops accounting for 5.4% The products grown in San Pedro Obraje are used for both self-consumption and are sold to intermediaries.

In the neighborhoods of Corazón de Jesús, Fátima and Bolívar residents have built their homes, while also conducting agricultural activities in other plots located in the Municipality of Tangua, where they grow products such as corn, beans, peas, vegetables, wheat, barley and potatoes, which are used for self-consumption as well as sold to intermediaries.

In the minor land unit of El Vergel peas are the most commonly grown crop, accounting for 53.6% of the planted area, followed by grasslands at 17.8%, wheat and barley with 8.9%, and the following crops with 3.6 each: corn, coffee, potatoes and beans, along with other sundry crops with 5.3%. In El Vergel, citric fruits, grasslands and wood extraction are used for self-consumption, while other products such as corn, coffee, potatoes and beans are used for both self-consumption as well as sold to intermediaries.

In the village of Buena Esperanza, 43.1% of the planted area has grasslands, 20.7% is used to grow potatoes, 13.8% to grow peas, 12.1% is planted with corn and 10.3% with beans.

All of the crops in the village of Buena Esperanza are used for self-consumption and for sale to intermediaries; only grasslands are exclusively for self-consumption.

#### Characteristics of the Job Market

The most significant sources of revenue at El Pedregal are linked to the main economic activities; their order is determined by the most significant or the one carried out by

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most individuals; for El Pedregal, commerce is the main economic activity, followed by tourism and cattle farming.

The village data sheet contains the average family income as a percentage, as follows:

In Pilcuán the income from 100% of the families are lower than two monthly minimum wages. 80% of said families receive an income of less than one monthly minimum wage, while the remaining 20% make between one and two monthly minimum wages. The most significant source of income at Pilcuán is commerce, followed by tourism and poultry farming, with agriculture ranked at number three.

Therefore, the commercial activities in Pilcuán, that families work in, generate higher revenues for them than other activities; however, the average family is made up of six individuals, whom the family must support with this income; this effectively limits the ability to satisfy the basic needs of the whole family group.

In El Pedregal 70% of the families earn less than one monthly minimum wage, which for this year is \$689,454, and 20% of the families make between one and two monthly minimum wages, and 10% of the families earn between two and three monthly minimum wages; furthermore, three or more individuals contribute to the family income.

As was described before, there is a significant percentage of families in El Pedregal whose average revenues are between one and two monthly minimum wages; also, there is a small percentage of the families with revenues ranging between two and three monthly minimum wages; this is evidence that economic activities such as commerce and tourism, that these families in these minor land units work in generate a higher income for them than if they were to work in other activities; however, the average family group is comprised by 6 individuals, who need to live on those revenues. This, means these families have little chance of saving money.

The main economic activity in Inantas Bajo and Inantas Alto is agriculture; for Inantas Bajo the second most important economic activity is poultry farming.

In the villages of Inantas Bajo and Inantas Alto, 100% of families have incomes below 1 minimum wage, which for 2016 is \$689,454. In Inantas Alto, two people contribute to the family income, while in Inantas Bajo three or more people do so.

The average family revenue less than the monthly minimum wage, which means that families dedicated exclusively to these economic activities only generate subsistence income and, given that the average family in Inantas Alto and Inantas Bajo are comprised by three and four members, respectively, this limits the ability to satisfy the basic needs of the whole family group. Considering that in Inantas Alto two people contribute to the family income, and in Inantas Bajo it is usually three or more people contributing to such revenue, almost all of the family group must take part in revenue generation activities, which means that per-capita revenues are smaller.

The most representative sources of employment for the minor land units of Tablón Obraje, El Vergel, Cochaverde, Buena Esperanza and San Pedro Obraje, are associated with the main economic activities; the order is determined by their importance or by the ones carried out by the most people. The main economic activity is Agriculture. The second most important economic activity in the villages of El Vergel, Buena Esperanza and San Pedro Obraje is cattle farming. Agriculture is the main economic activity in Cochaverde, followed by commerce and cattle farming.

Families in the minor land units of Tablón Obraje, El Vergel, Cochaverde and Buena Esperanza earn revenues of less than one monthly minimum wage, which for 2016 is \$689,454. For the villages of: El Vergel, Cochaverde and Buena Esperanza, only one person contributes to the family income. In Tablón Obraje two people contribute to the family income.

In the village of San Pedro Obraje, 86% of families have an income below one minimum wage, 14% of families make between one and two minimum wages. Also, three or more people provide family income.

In the neighborhoods of Tangua, Corazón de Jesús, Fátima and Bolívar, the average family income is one monthly minimum wage. Additionally, two people provide family income.

The primary sector has a predominant percentage in the minor land units in UF 4 which belong to the Municipality of Tangua. That is, they mainly work in agriculture and cattle farming, which generates average family incomes that are not above the minimum wage. This shows that the economic activities that they carry out only generate

subsistence incomes for families; considering that on average, people have families of 4 people, it limits the capacity to meet the basic needs for the entire family group. See Figure 5.3.78

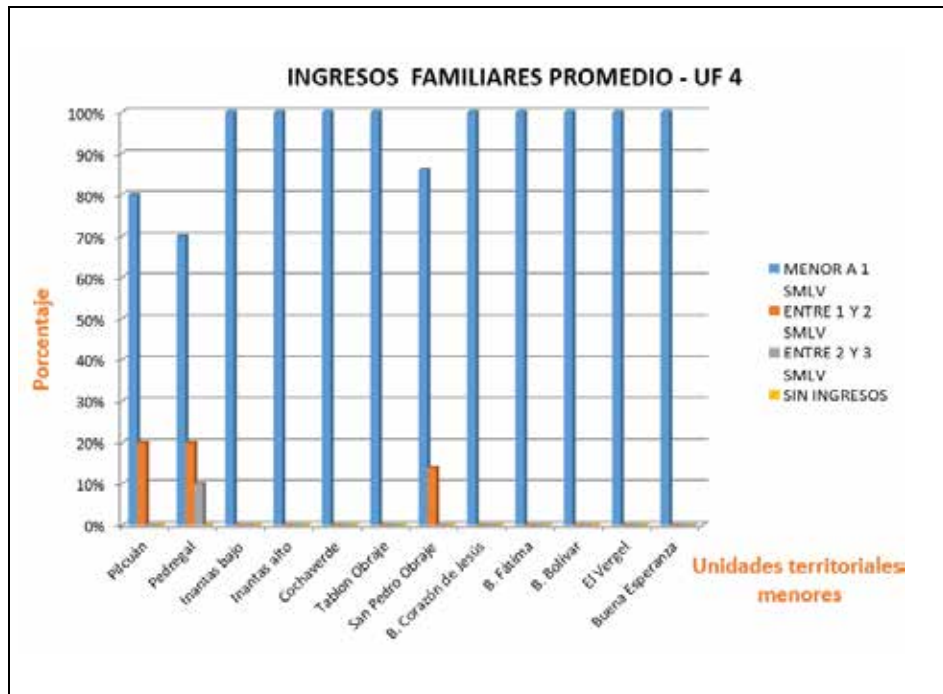


Figure.5.3.76 Average Family Income in land units Below UF 4

Source: Village Data Sheet (Géminis Consultores Ambientales S.A.S., 2016)

Existing public, private and/or community programs and projects.

According to the information provided by the Yacuanquer City Hall, an area has been identified to develop a project for the construction of social housing, in the land unit of Inantitas Bajo. The rural housing community is called Villa María and is comprised by 31 plots of 2,500 square meters each, for a total of 9.4 hectares. The project is currently in the process of obtaining the construction license. The plan calls for the installation of a grooved concrete tracks in the access roads to the villages of Inantitas Alto and Inantitas Bajo, as well as for the performance of road maintenance starting in November of this year.



In order to foster the ecological restoration and reforestation using native plants, there is currently a project to build a greenhouse for the central zone in the Department of Nariño, where some of the Municipalities in the area of influence are included, such as Tangua, Yacuanquer and Pasto.

Also, the Galeras Ring Road project, will help the mobility and transit in five municipalities around the Galeras Volcano: Yacuanquer, Consacá, Sandoná, Nariño and Pasto, is currently a reality. "The Galeras Ring is a department-level road. It is a roadway which merges with the Panamerican freeway in two locations: one in the Municipality of Pasto, in the Las Banderas roundabout, and one in the Municipality of Tangua, in the minor land unit of El Cebadal". (Plan de desarrollo de Tangua , 2016 - 2019)

Las Piedras Project An Inter-Institutional Cooperation Agreement was signed in 2006 between the Government of Nariño, CORPONARIÑO, the Municipality of Pasto, EMPOPASTO S.A. E.S.P., and the Municipality of Tangua, in order to join human, economic, technical and administrative resources and efforts for the comprehensive and sustainable management of the Las Piedras stream, in the context of the Zoning Plan, and the management of the Río Bobo river basin, in the Municipalities of Pasto and Tangua, in the Department of Nariño.

Conservation Corridors: In the context of the implementation of the Proyecto Fondo Patrimonial Mosaico Galeras (Galeras Mosaic Equity Fund Project) which was carried out by the Galeras Flora and Fauna Sanctuary, work has been progressing in the characterization of a Conservation Corridor, corresponding to the villages of Los Ajos and La Marqueza Alto, where isolation of the conservation areas is necessary to minimize intervention over the conservation areas, releasing restoration areas, which must come jointly with a program to implement incentives to conservation.

There are productive organizations on record, which are dedicated to agricultural exploitation, livestock breeding and services in the Municipality of Imués, with the following association belonging to the village of El Pedregal: Asociación de Porcicultores El Pedregal ASPODE (Pork Breeders Association of El Pedregal). In the minor land unit of Pilcuán there is a sewage project which, according to community leaders, already has resources assigned to it; presently, the design of the road has been

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socialized with the community, and has not been contested by the overseers, so the development and implementation of this project is dependent on the drive and leadership found in the community, which would satisfy a deeply felt need in Pilcuán.

Productive chains and their relationship with the region's economic dynamics.

The information collected in the village data sheets is very limited regarding productive chains, since the area has yet to systematize this type of information; the information provided is equivalent to approximations and estimates made by the leaders who participated in filling out the survey.

Based on the limited primary information provided, and the almost non-existent secondary information available, an attempt was made to draw an answer to each of the items listed in the terms of reference, related to the economic component in the minor land units.

A qualitative analysis was done between the main economic activity, the main production destination, and the trade activities of the village. The main economic activities are agriculture and cattle farming, with products being mainly used for self-consumption with any surplus being sold through intermediaries or in local markets; prices are subject to the laws of supply and demand, as would be the basic principle in any market-based economy.

That is, they fulfill the role of food suppliers for domestic markets as the first link in the productive chain. However, the processes for the transformation and production of intermediate and final goods for subsequent trade are not being carried out. Therefore, no added value is being generated for agricultural products, which would allow for higher profits to farmers that make a living from agricultural activities.

The 2012 - 2015 Development Plan for Imués states that the Municipality has two systems for the exploitation of hog farming: one technical and one traditional; the sale of sucking pigs is done in the local market at restaurants in El Pedregal and to the general public, as well as in the neighboring municipalities. Since commerce is the main economic activity in the minor land unit of El Pedregal, and since restaurants make up the largest number of commercial establishments, this minor land unit is identified as a

source and destination, or final link, in the hog farming productive chain; that is, hogs are bred in the villages (supply) and are sold to restaurants, which sell a traditional dish made up of fried pork meat and potatoes.

In the other minor land units, according to the information provided by community leaders, productive chains are not representative because they have not been associated with the main economic activities that generate income.

On the other hand, one of the strategic objectives of the Nariño Regional Competitive Plan is to strengthen the existing productive chains with prioritized projects such as the strengthening of the coffee productive chain in the Department of Nariño, which stands as an opportunity for coffee-growing villages, with the goal of establishing a productive chain.

Existing and projected infrastructure in Municipal, Departmental, and National development plans.

The existing infrastructure is that which is described in the spatial component of the present study on the socioeconomic setting. The infrastructure projected for minor land units for Functional Unit 4, according to the municipal, departmental, and national development plans is as follows:

"After the Government and private sector stakeholders announced the start-up of the logistics module from the Intermodal Master Plan 2015 – 2035, the National Council of Economic and Social Policies (CONPES) approved a document that established the guidelines to change the tertiary roads network in the coming years. CONPES document 3857, which took into consideration some of the suggestions made by the Colombian Infrastructure Chamber (CCI) can be considered as an important first step in improving the connectivity of rural areas. The above will be a key tool for the transformation of the rural areas and the consolidation of peace". (Cámara colombiana de Infraestructura, 2016) According to the aforementioned CONPES document, having a prioritization methodology that properly and objectively identifies the characteristics of the road network, and which allows for the definition of a scheme where interventions can be prioritized, is key. This methodology must take into account the type of surface and its current state, the current degree of difficulty to access the areas each road sector

communicates into, as well as quantifying and determining the corresponding needs and benefits; also, it is necessary to compare and define the options for an intervention, as well as to establish the ways in which they must be contracted. It is important to identify the social characteristics of the sector in order reach a greater number of people; also ensuring that they have an optimal connection to social and cultural centers, as well as their development perspectives. It is worth noting that it is the duty of the mayorships and city halls to prioritize the different sections of road based on spacial, social and economic criteria.

The pact on inclusive local economic development contributes to the national cross-functional strategy for field transformation, as it identifies programs to aid in the comprehensive transformation of rural areas in Colombia, supporting women's economic empowerment in the fields, entrepreneurship and income generation, with support to economic infrastructure such as rural roads, market centers, municipal market centers, town markets, and irrigation infrastructure; all of this under the support framework for sustainable, agro-ecological, and equal rurality, supported by rural youth entrepreneurship, technical assistance, applied research, and rural property formalization, contributing to the national goal of achieving comprehensive transformation in the Colombian fields.

The developable zones in the municipality of Tangua, are located within the city limits, in compliance with the zoning plan. The municipality currently has a low income housing project with the Ministry of Housing, which is in the contracts stage. According to the information provided by the Tangua Secretary of Planning and obtained from the geographic information system in this survey, the housing project dubbed Piedra Grande II does not intercept the intended roadway under the Rumichaca - Pasto double-lane project.

**Poles for development and/or enclave**

The main economic activity in the village of El Pedregal is commerce, followed by tourism, as conditions provide for a very pleasant climate; its highest temperature being 23°C and its lowest being 7°C, with an average of 15°C. The beauty of the landscapes in the area is another contributing factor to this. See Image 5.3.96

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The minor unit of Pedregal is comprised by a population with a high economic dependence on trade and commerce, since this activity is quite predominant, and has been developed on account of the unit's strategic location, as it is in the junction of several important national and departmental roads such as the Panamerican freeway, which communicates Pasto with Ipiales and with neighboring Ecuador; the road towards the Tumaco sea port and other municipalities in the Department of Nariño.

Therefore, el Pedregal could become a pole for tourism development in the Municipality of Imués, on account of its weather conditions, its strategic location, and the beauty of its landscapes. Another important contributing factor is the large number of commercial establishments, restaurants, coffee shops, which are listed under the following item corresponding to the commercial structure, all of which provide significant contributions to the development of tourism in this minor land unit. See Image 5.3.96



Image 5.3.81 Panoramic View of the Minor Land Unit of El Pedregal  
Source <http://www.panoramio.com/photo/14063963>

#### Trade Structure, marketing networks

The marketing network is the means of distributing products from manufacturers to consumers. At El Pedregal citric fruits produced are used for sale in the villages or for

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direct sale. Mixed social productive units are present; said units are those in which the economic activities are developed from the place of residence; a total of 60 such units were recorded, located on the side of the current road, which include: 30 restaurants - cafeterias, 6 stores, 1 stationery store, 1 "Efecty" or wire transfer station, 8 granaries, 1 "SAI" or telephone services point, 1 bakery, 2 hardware stores, 4 tire repair stations, 1 butcher shop, 1 dance club, 1 billiard hall, 1 produce store, 1 chicken store, 1 pharmacy. Seven social units dedicated exclusively to production were recorded, comprised by 2 hotels, 1 parking lot, 1 hardware store, 2 restaurants, 1 hotel-restaurant.



Image 5.3.82 Commercial activities carried out by the side of the road.

In the El Pedregal land unit.

Planar Coordinates. Origin Magna Colombia West

E 582835,362 - N 939690,482

Source (Géminis Consultores Ambientales S.A.S, 2016)

Over time, restaurants, cafeterias, hotels, granaries and other businesses have become a clear economic option, seeking to improve the income of the population belonging to the human settlements in the land unit of El Pedregal, who leverage on the inflow of vehicles to offer their products and services; this causes vehicular congestion and affects pedestrian traffic in the area.

In Inantas Bajo, agricultural production of coffee and beans is sold to intermediaries; corn is sold in the villages. There are two stores that comprise all of the existing commercial establishments in the village.

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In Inantas Alto, agricultural production of coffee, beans and onions is sold to intermediaries and in the villages. There are no commercial establishments in the village.

Currently, informal sales made from mobile posts (selling fruit), locksmiths, tire repair stations, and stores can be observed which, over time, have become an alternative in terms of revenue generation in order to improve the income of the people living in human settlements located on the right of way or the side of the road along the corridor by leveraging on vehicular traffic to offer their products. See Image 5.3.98



Image 5.3.83 Village of Chirimoya – Municipality of Yacuanquer  
Planar Coordinates Origin Magna Colombia West  
N 608441,13 E 960504,32

Source (Géminis Consultores Ambientales S.A.S, 2016)

The following products are sold to intermediaries in Cochaverde: corn, coffee, beans and peas; the most important ones being beans and coffee. There are two stores that comprise all of the existing commercial establishments in the village.

In Tablón Obraje the main agricultural products such as beans and onions are sold to intermediaries, as well as corn, coffee and peas. Three stores and one telephone-internet booth comprise all of the commercial establishments.

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In San Pedro Obraje all products grown are sold to intermediaries, such products include coffee, potatoes, beans, peas, and white onions, also called potato onions. There are three stores that comprise all of the existing commercial establishments in the village.

In the neighborhoods of Tangua residents have built their homes, while also conducting agricultural activities in other plots located in the Municipality, where they grow products such as corn, beans, peas, vegetables, wheat, barley and potatoes. The commercial establishments in this area are: three stores in the Corazón de Jesús neighborhood, five stores in Fátima and three stores in Bolivar.

In el Vergel, agricultural products such as corn, coffee, potatoes and beans, are sold to intermediaries. There are no commercial establishments in the village.

All crops grown in the village of Buena Esperanza are sold to intermediaries; such crops are: corn, potatoes, beans and peas. There are three stores that comprise all of the existing commercial establishments in the village.

**Productive companies in Primary, Secondary, and Tertiary sectors**

"The economic sector can be defined as a group of economic activities which include activities from the private, secondary and tertiary sector. The primary, or agricultural sector, is the one which receives the product of its activities directly from nature, with no additional transformation process. This sector includes agriculture, cattle farming, fish farming, hunting and fishing. This sector does not include mining and oil extraction, since these activities have been included into the industrial sector. The secondary sector includes all of a country's economic activities related to the industrial transformation of foodstuffs and other types of goods or products, which are then used as the base for the manufacturing of new products. It is divided into two sub-sectors: industrial extraction and industrial transformation: Industrial extraction: mining and oil extraction. Industrial transformation: packaging of fruits and legumes, bottling of juice, manufacturing of manure and fertilizers, vehicles, cement, appliances, etc. The tertiary, or services sector, includes all activities which, while not producing products per se, are still necessary for a proper operation of the economy. Examples of this

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sector include commerce and trade, restaurants, hotels, transportation, financial services, communications, education and professional services". (Subgerencia Cultural del Banco de la República. Sector real., 2015).

A distribution was made according to the economic sector for land units in Functional Unit 4, based on the concepts quoted above. In order to determine the percentage, information on the main economic activities was used, as found in the village data sheet; it contains an option for order of importance. This information is compared with the percentage of income for this activity, which is found in the village data sheet under the question on sources of employment in the village and/or neighborhood. That is how, at the minor land units of Inantas Alto and Inantas Bajo, for example, they only carry out activities from the primary sector, therefore the percentage assigned to this sector is 100%.

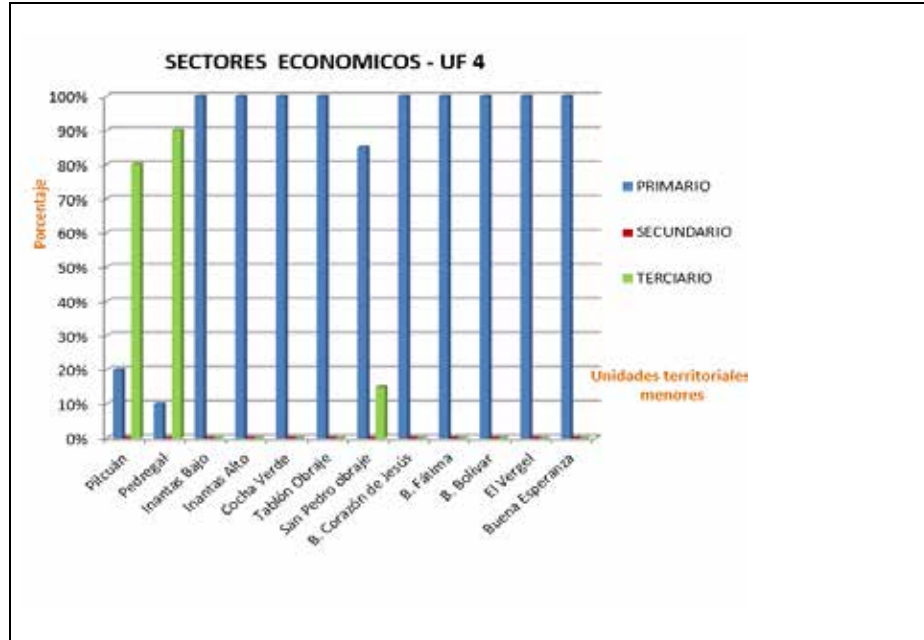
None of the minor land units has any involvement in the secondary sector. The tertiary sector has a predominant percentage in Pilcuán, Pedregal, San Pedro Obraje. In the neighborhoods of Tangua, Corazón de Jesús, Fátima and Bolivar, residents have built their homes, but also carry out agricultural and farming activities in other properties in Tangua. See Table 5.3.40

Table 5.3.32 Economic Sector Distribution by minor land unit in Functional Unit 4

Minor land unit	ECONOMIC SECTOR		
	Primary Sector	Secondary Sector	Tertiary Sector
Pilcuán	20%	0%	80%
Pedregal	10%	0%	90%
Inantas Bajo	100%	0%	0%
Inantas Alto	100%	0%	0%
Cocha Verde	100%	0%	0%
Tablón Obraje	100%	0%	0%
San Pedro Obraje	85%	0%	15%
Corazón de Jesús Neighborhood	100%	0%	0%
Fátima Neighborhood	100%	0%	0%
Bolivar	100%	0%	0%

Minor land unit	ECONOMIC SECTOR		
Neighborhood			
El Vergel	100%	0%	0%
Buena Esperanza	100%	0%	0%

Source (Géminis Consultores Ambientales, S.A.S. 2016)



Economic Sector Distribution Image for minor land units in UF 4.  
Source (Géminis Consultores Ambientales S.A.S, 2016)

### Functional Unit 5.1

#### Land ownership structure:

According to information provided by the community leaders, the land ownership structure at the minor land units in the Municipality of Pasto, according to the classification based on property size is outside the categories defined by the Instituto Geográfico Agustín Codazzi - IGAC as mentioned before, since most of the plots are less than 5 hectares in size, which means that the predominant land unit is the small farm; such is the case of the plots located in the minor land units in Chávez, Marqueza Alto, San José de Catambuco, Vocacional and La Merced, where the prevailing areas are between 1 and 5 hectares; some cases were also identified where the larger portion of the plots in a given area is comprised by properties of less than one hectare in size, such as is the case in El Cebadal, El Páramo, El Tambor, Marqueza Bajo, Los Ajos, Huertecillas,

Cubiján Bajo, Gualmatán Alto and Catambuco. On the other hand, in the minor land units of La Palizada and Cubiján Alto the prevailing plot size is between 5 and 20 hectares, corresponding to the small property classification. See Table 5.3.41

Table 5.3.33 Land ownership structure in the minor land units in Functional Unit 5.1.

Minor land unit	Type of Property	Total Village Area (Ha)
El Cebadal	Small farm	307,20
Chavez	Small farm	290,65
El Tambor	Small farm	197,81
El Páramo	Small farm	595,75
La Palizada	Small	1184,82
Marqueza Bajo	Small farm	135,37
Los Ajos	Small farm	1043,83
Marqueza Alto	Small farm	512,81
Gualmatán Alto	Small farm	1028,31
Vocacional	Small farm	230,20
Cubiján Alto	Small	324,82
Cubiján Bajo	Small farm	171,25
La Merced	Small farm	452,19
San Jose de Catambuco	Small farm	268,75
Catambuco	Small farm	258,91
Huertecillas	Small farm	320,43

Source (Géminis Consultores Ambientales, S.A.S. 2016)

According to the information in the table above, 100% represents the 16 villages and in Functional Unit 5.1; according to the village data sheet, 14 of them, that is, 87.5% of the minor land units have properties whose range of sizes match those for Small Farms. In two of the villages, that is, 12.5% of the minor land units, the majority of the plots are classified as small properties.

Types of land holders:

The predominant form of land ownership in the land units in UF 5-1 is through a property deed. The percentages in the table below are those reported in the village data sheet. For all villages, except Gualmatán Alto, the percentage is higher than 80%. There are land holders in El Cebadal, Gualmatán Alto, Catambuco, La Palizada and Huertecillas. There is a small percentage of lessees in El Cebadal, Los Ajos and Marqueza Alto. See Table 5.3.42

Table 5.3.34 Types of land holders in the minor land units of UF 5.1.

VILLAGE	OWNERSHIP (%)				
	Associative	Owner	Holder	Lessee	Other
El Cebadal	-	70%	27%	3%	-
Chavez	-	90%	-	10%	-
Tambor	-	90%	-	10%	-
El Páramo	-	100%	-	0%	-
La Palizada	-	80%	10%	10%	-
Marqueza Bajo	-	100%	-	-	-
Los Ajos	-	95%	-	5%	-
Marqueza Alto	-	97%	-	3%	-
Gualmatán Alto	-	60%	10%	30%	-
Vocacional	-	100%	-	-	-
Cubiján Alto	-	80%	20%	-	-
Cubiján Bajo	-	90%	-	10%	-
La Merced	-	90%	-	10%	-
San Jose de	-	100%	-	-	-

VILLAGE	OWNERSHIP (%)				
Catambuco					
Catambuco	-	80%	10%	10%	-
Huertecillas	-	99%	1%	-	-

Source (Géminis Consultores Ambientales, S.A.S. 2016)

When ownership predominates, the right to decide on how the land is used becomes consolidated, be it for grazing, or to decide what crops should be planted, and to gain financial benefit from the sale of crops. The right to sell or mortgage land, to transfer it to others through inheritance, or to create a leasing or sharecrop mechanism that recognizes the right of the lessee or sharecropper to use the land under pre-established conditions. The inhabitants of the minor land units retain such rights, due to the predominance of their condition as owners.

However, Gualmatán Alto, one of the minor land units, shows a relatively high percentage of lessees (30%) which means this population shows a trend towards moving in order to improve their conditions in another plot that is available for rent.

See Figure 5.3.77

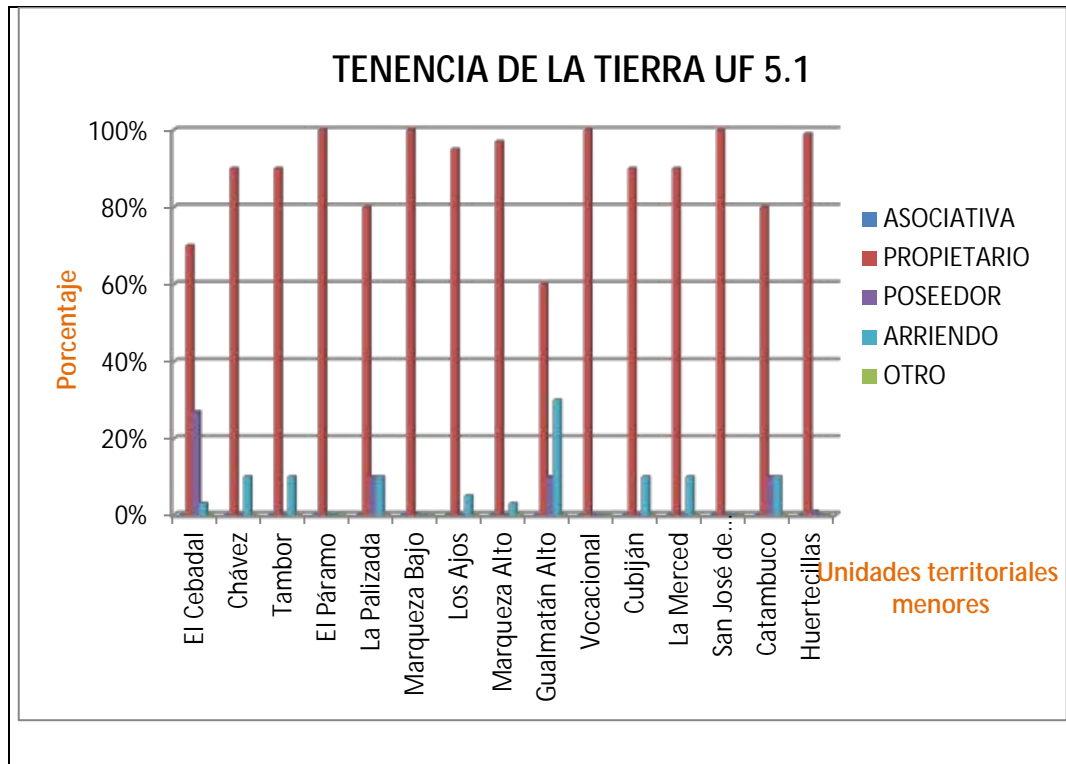


Figure.5.3.77 Land possession in the minor land units in Functional Unit 5.1.

Source (Géminis Consultores Ambientales S.A.S, 2016)

The fact that ownership is the predominant form of land possession means, as has been said before, that reaching agreements will be easier, as disposing of the land will be simpler, which will facilitate both the development of the project, as well as the conduction of the actions established as part of the proposed management measures.

Now, with regards to land holding in this condition, the implementation of the project will not only maintain this situation but will even drive it further, since the actions to be carried out as part of the construction will always need to be framed in a context of legality.

#### Land uses

The 2016 - 2019 Development Plan for Pasto defines the environmental and agricultural use of land in the Municipality of Pasto; 81.2% of the area is comprised by

woods, 11.7% is dedicated to agricultural activities with the remaining percentage, that is 7.1%, dedicated to other uses.

According to the results of this assessment regarding Functional Unit 5.1, the distribution of the land uses is as follows: agricultural 62%, conservation 20%, urban 9%, transportation 5%, forestry 3%, industrial 1%.

According to the main economic activities carried out in the minor land units in Functional Unit 5.1, the land use in El Cebadal, Chávez, El Tambor, El Páramo, La Palizada, Marqueza Bajo, Los Ajos, Marqueza Alto, Gualmatán Alto, Vocacional, Cubiján, La Merced, San José de Catambuco and Huertecillas is multiple: residential and agricultural. In Catambuco land use is multiple, commercial, residential and agricultural.

#### Productive and technological processes

The inclusion of technological processes is scarce, since residents dedicate their productive to subsistence agriculture with production being mainly used for self-consumption with the surplus being sold intermediaries. This is reflected in low productivity and competitiveness.

Livestock production. In the minor land units of El Tambor, La Palizada, Cubiján Alto, and Marqueza Bajo, cattle breeding is the most important activity, for which there is a double purpose, namely, beef and milk. See Image 5.3.99

Cattle farming is second in importance after agriculture at the minor land units of El Cebadal, El Páramo, Marqueza Alto, Chavez, La Merced, San Jose de Catambuco, Vocacional, Huertecillas, Gualmatán Alto, and Cubiján Bajo. See Image 5.3.100 At Los Ajos, cattle farming is not ranked high in importance.

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Image 5.3.84 Cattle farming activity in the village of El Tambor, Planar Coordinates. Origin Magna Colombia West  
 N 616886,722 - E 968084,397  
 Source (Géminis Consultores Ambientales S.A.S, 2016)

With the Free Trade Agreements signed with developed countries with market dynamics are predominant, it is possible to conclude that if the stakeholders responsible for regional development do not articulate themselves around research, technology and associative work, the dairy sector is at risk of disappearing.



Image 5.3.85 Cattle farming activity in the village of Cebadal in the Municipality of Tangua

Planar Coordinates Origin Magna Colombia West  
 N 615408,988 E 966916,047  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)

Bovine cattle is bred with a dual purpose (meat and milk) in Gualmatán, Vocacional and Huertecillas. Cattle is used for milk in La Merced, San José de Catambuco and Cubiján. There is some cattle farming in Catambuco, although this economic activity is not ranked high in order of importance.

Other species such as pork, guinea pigs and chickens are bred in the minor land units in UF 5.1, with horses and rabbits being produced in smaller proportions. See Image 5.3.101



Image 5.3.86 Breeding of minor species in San José de Catambuco - Municipality of Pasto Planar Coordinates. Origin Magna Colombia West  
 N 618548,348 E 975596,205  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)

Agricultural production. In the minor land units of UF 5.1, the agricultural production of vegetables, potatoes, and grass represents a significant percentage of the planted area.

The table below shows the main agricultural products and the planted area in each minor land unit, according to the information collected from the village data sheet. If the total number of hectares reported in it is taken as 100%, the percentage being used

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to grow each product in the minor land unit can be calculated. Therefore, at the minor land unit of El Cebadal the main agricultural production is made up of potatoes at 28.8%, followed by corn at 15.4% as well as wheat - barley also with 15.4%, and beans with 11.5%, wood extraction at 11.5%, and other products such as peas, vegetables and grasslands, with 17.4%. See Image 5.3.102. At the village of El Cebadal vegetables, grasslands and wood extraction are used for self-consumption; therefore, the planted areas are relatively smaller than those used for other products, which are both used for self-consumption as well as sold to intermediaries. This information is reported in the village data sheet on the section corresponding to the main destination of the agricultural production.

Table 5.3.35 Agricultural products and planted areas in the minor land units in UF 5.1

Minor Land Unit	Planted Area (Hectares)											
	Vegetables	Corn	Coffee	Beans	Peas	Citric Fruits	Onion	Grass	Potato	Wheat - Barley	Others	TOTAL
El Cebadal	2	8	-	6	4	-	-	3	15	8	6	52
Chavez	2	8	-	18	20	-	-	50	5	-	15	118
El Tambor	8	7	-	-	6	-	-	-	12	-	25	58
El Páramo	1	-	-	-	-	-	-	200	100	-	-	301
La Palizada	x	-	-	-	-	-	-	x	x	-	-	--
Marqueza Bajo	-	-	-	-	-	-	-	70	3	-	-	73
Los Ajos	-	-	-	-	-	-	-	-	10	-	-	10
Marqueza Alto	-	-	-	-	-	-	-	-	20	-	-	20
Gualmatán Alto	40	-	-	-	-	-	-	6	8	-	-	54
Vocacional	2	-	-	-	1	-	-	-	3	-	-	6
Cubiján Alto	1	-	-	-	1	-	-	15	5	-	-	22
Cubiján	-	-	-	-	-	-	-	80	50	-	-	130

Bajo												
La Merced	1	-	-	-	-	-	-	1	2	-	-	4
San Jose de Catambuco	2	-	-	-	-	-	-	-	20	-	-	22
Catambuco	2	-	-	-	-	-	-	-	5	-	-	7
Huertecillas	30	-	-	-	-	-	-	-	-	-	-	30

Source (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.87 Crops in El Cebadal in the Municipality of Tangua

Planar Coordinates. Origin Magna Colombia West

E 971533,079 N 620245,914

Source (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.88 Pea crops in the village of El Cebadal in the Municipality of Tangua  
 Planar Coordinates Origin Magna Colombia West  
 N 614297,744 E 966448,919  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)

Out of the total planted area in the village of Chávez, 44.3% is used for grasslands, followed by peas with 17.7% beans at 15.9%, wood extraction with 13.3% and other products at 8.8%. The destination of the agricultural production is self-consumption, the sale to intermediaries and in the villages.

Properties in the urban area of Chávez have home orchards where vegetables are grown for self-consumption. The image below shows the agricultural jobs related to the selection of peas, one of the products grown in this minor land unit. See Image 5.3.104



Image 5.3.89 Agricultural jobs in Chávez - Municipality of Tangua  
 Planar Coordinates Origin Magna Colombia West  
 N 624919,611 E 976890,074  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)

The products most commonly grown at the village of El Tambor are potatoes, with a planted area equivalent to 20.7% of the planted land in the village, peas, with 10.3%, corn, with 12.1%, vegetables with 13.8%, and other sundry products including broad beans, with 43.1%. In the village of El Tambor only corn and vegetables are used for self-consumption, all other products such as potatoes, peas and broad beans are used for self-consumption, sold to intermediaries and in village sales.

In the minor land unit of El Páramo, the products with the largest planted areas are potatoes (33.33%), and grasslands (66.4%). Vegetables represent 0.3%. In this village potatoes, grasslands and vegetables are purely used for self-consumption.

In the village of La Palizada, the most commonly grown agricultural products are potatoes, grasslands and vegetables; the information regarding planted areas, however, is not available. Potatoes are used for self-consumption, are sold to intermediaries and in the villages; grasslands and vegetables are used for self-consumption.

In the village of Marqueza Bajo 95.9% of the planted area is used for grasslands, and 4.1% is used for growing potatoes. Both products are used for self-consumption; potatoes are also sold to intermediaries and grasslands are sold in the village.

In the village of Los Ajos, agriculture is the most important economic activity, and the most commonly grown product are potatoes, which are used for self-consumption as well as sold to intermediaries.

In the minor land unit of Marqueza Alto, the most significant crop is potato, and it is sold to intermediaries.

In the minor land unit of Gualmatán Alto the largest planted area is used for vegetables, at 74.1%, followed by potatoes with 14.8% and grasslands with 11.1%. In this village the production of potatoes is used for self consumption, as well as sold to intermediaries and in the village; vegetables are used for both self-consumption as well as for sale to intermediaries, and grasslands are used for self-consumption.

In Vocacional the largest planted areas are the ones used for potatoes, at 50%, followed by vegetables with 33.3% and peas with 16.7%. The production of vegetables and potatoes is sold to intermediaries, peas are used for self-consumption and sold in the villages.

In Cubiján the largest planted areas are the ones used for grasslands, at 68.2%, followed by potatoes at 22.72% along with vegetables and peas with 4.54% each. Potatoes and vegetables are for self-consumption and are also sold to intermediaries; grass is sold in the village and peas are used for self-consumption.

In Cubiján Bajo most (61.5%) of the planted areas are used for grasslands, followed by potatoes with 38.5%.

Potatoes are sold to intermediaries and in the city of Pasto. Grasslands are for self-consumption. There are orchards which are used to grow products for self-consumption.

In La Merced, the largest planted area is the used for potatoes, at 50%, followed by vegetables at 25% and grasslands with 25%. Grasslands and vegetables are used for

self-consumption, and the potatoes produced are used for self-consumption as well as sold to intermediaries. See Image 5.3.105



Image 5.3.90 Agricultural and livestock production in La Merced - Municipality of Pasto Planar Coordinates Origin Magna Colombia West N 618859,9456 E 974255,7551 Source (Géminis Consultores Ambientales, S.A.S. 2016)

In San José de Catambuco, the largest planted area is used for growing potatoes, with 90.9%, followed by vegetables with 9,1%. Potatoes are sold to intermediaries, vegetables are used for self-consumption and also sold to intermediaries.

In Catambuco, the largest planted area is used for growing potatoes, at 71.4%, followed by vegetables at 28.6%. The potato and vegetable production is used for self-consumption, sold to intermediaries and in the villages.

In Huertecillas, the most common crops are vegetables, which are used for self-consumption, sold to intermediaries and in the villages.





Image 5.3.91 Crops in Huertecillas – Pasto

Planar coordinates Magna Origin Colombia West

N 624919,611 E 976890,074

Source (Géminis Consultores Ambientales, S.A.S. 2016)

Considering that the outstanding productive activities in the area of influence of the Rumichaca – Pasto double lane road project, Pedregal – Catambuco section, are associated with agriculture, cattle breeding, minor species breeding, and trade. It is important for the productive and technological processes to become modernized, by determining training subjects as well as associations or groups that carry out productive activities in order to promote processes for entrepreneurship and their improvement.

#### Characteristics of the Job Market

The most representative sources of employment for the minor land units of El Cebadal, El Paramo, Marqueza Alto, Chavez, and Los Ajos, are associated with the main economic activities; the order is determined by importance or the highest number of people. The main economic activity for these villages is Agriculture. For the villages of El Cebadal, El Paramo, and Chavez, cattle breeding comes after agriculture in order of importance.

Trade ranks third after agriculture and cattle breeding in the villages of El Cebadal and Cubijan Bajo, and poultry farming for El Paramo and Marqueza Alto. For El Tambor, La

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Palizada, Cubijan Alto and Marqueza Bajo, the most important activity, or that with the highest number of people, is cattle breeding followed by agriculture. El Tambor ranks third in poultry farming and trade ranks fourth.

In Marqueza Bajo, some people move cattle using the current Panamerican highway, as seen in the photo below. See Image 5.3.107



Image 5.3.92 Moving cattle in Marqueza Bajo – Municipality of Tangua  
 Planar coordinates Magna Origin Colombia West  
 N 613563,676 E 967082,924  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)

The families in the minor land units of El Cebadal, El Paramo, Marqueza Alto, La Palizada, Chavez, El Tambor, and Los Ajos have incomes below 1 minimum wage, which for the present year is \$689,454. For the villages of: Marqueza Alto and Chavez, only one person provides family income. In the villages of El Cebadal, El Paramo, El Tambor, and Los Ajos, two people provide family income, and only in La Palizada do 3 or more people provide family income.

The villages data sheet contains the average family income in the minor land units by percentage as follows:

In Marqueza Bajo, 75% of families have income below 1 minimum wage, with only one person providing income, and 25% of families have no income.

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The most representative sources of employment for the villages are associated with the main economic activities; the order is determined by importance or by the highest number of people. For La Merced, San Jose de Catambuco, Vocacional, Huertecillas, and Gualmatan Alto, the main economic activity is Agriculture, followed by cattle breeding. See Image 5.3.108 In Huertecillas and Vocacional, the third most important economic activity is poultry farming and handicrafts, respectively. For Catambuco, the main economic activity is trade, and the second is tourism, followed by industry, agriculture, and cattle breeding.



Image 5.3.93 Crops in Huertecillas – Pasto  
 Planar coordinates Magna Origin Colombia West  
 N 624919,611 E 976890,074  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)

In the villages of Vocacional and Gualmatan Alto, 100% of families have incomes below 1 minimum wage, which for the present year is \$689,454. In Vocacional, one person provides family income and in Gualmatan Alto, two people provide family income.

In La Merced, 73% of families have an income below 1 minimum wage, 22% of families between 1 and 2 minimum wages, and 5% of families have no income. Also, two people provide family income when they have it.

In San Jose de Catambuco and Cubijan Bajo, 90% of families have an income below 1 minimum wage, and 10% of the families in these villages between 1 and 2 minimum monthly salaries. Also, two people provide family income.

In the land unit of Cubijan Alto, 60% of families have an income below 1 minimum wage, and 40% of families between 1 and 2 minimum wages.

In Huertecillas, 76% of families have an income below 1 minimum wage, 24% of families between 1 and 2 minimum wages. Also, two people provide family income.

In Catambuco, 85% of families have an income below 1 minimum wage, 10% of families between 1 and 2 minimum wages, and 5% of families have no income. Also, three or more people provide family income when they have it.

The main sector has a predominant percentage in land units below UF 5.1. That is, they mainly work in agriculture and cattle breeding, which generates average family incomes that are not above the minimum wage, which shows that the economic activities that they carry out only generate subsistence incomes for families, considering that on average, people have families of 4 people, it limits the capacity to meet basic needs for the entire family group. Table 5.3.44 Average family income in UF 5.1 See Figure 5.3.80

Table 5.3.36 Average family income in UF 5.1

Minor land units	OWNERSHIP (%)			
	Below 1 Minimum Wage	Between 1 and 2 MW	Between 2 and 3 MW	No Income
El Cebadal	100%	-	-	-
Chavez	100%	-	-	-
Tambor	100%	-	-	-
El Paramo	100%	-	-	-
La Palizada	100%	-	-	-
Marqueza Bajo	75%	-	-	25%
Los Ajos	100%	-	-	-
Marqueza	100%	-	-	-

Minor land	OWNERSHIP (%)			
Alto				
Gualmatan Alto	100%	-	-	-
Vocacional	100%	-	-	-
Cubijan	90%	10%	-	-
La Merced	73%	22%	-	5%
San Jose de Catambuco	90%	10%	-	-
Catambuco	85%	10%	-	5%
Huertecillas	76%	24%	-	-

Source (Géminis Consultores Ambientales, S.A.S. 2016)

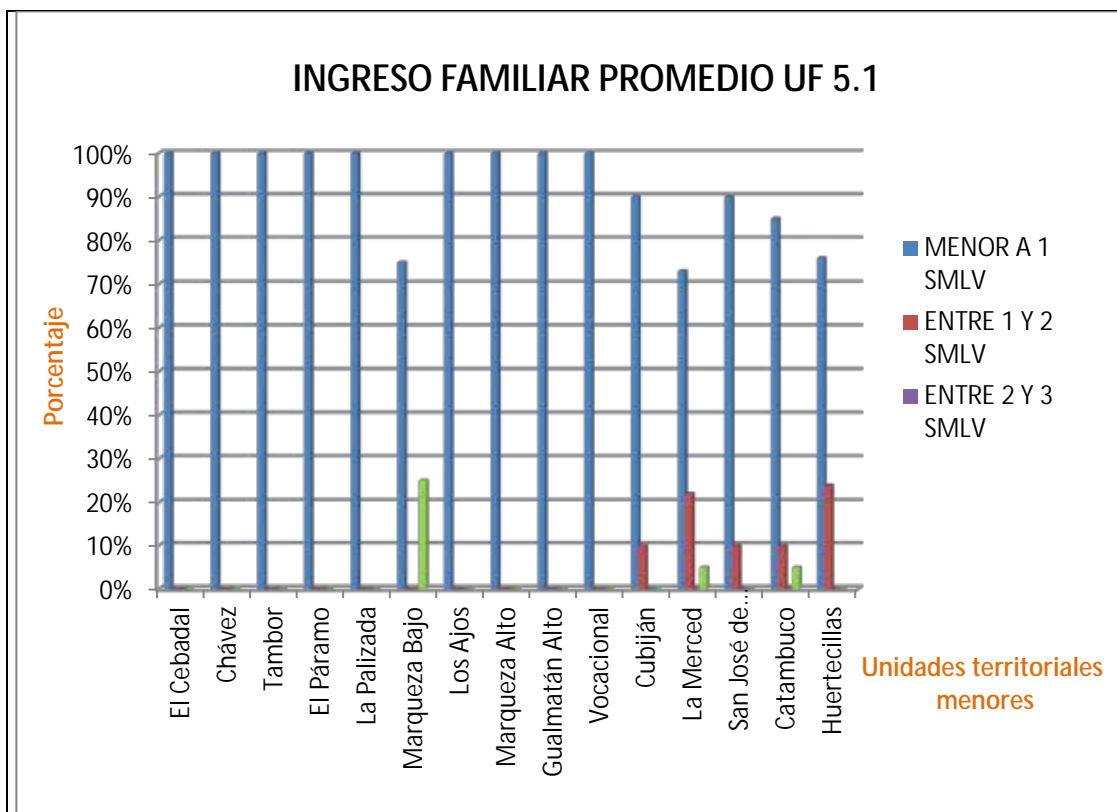


Figure 5.3.78 Average Family Income in land units

Below UF 5.1

Source (Géminis Consultores Ambientales S.A.S, 2016)

Existing public, private and/or community programs and projects.

The project for optimizing the aqueduct that covers Tambor, Los Ajos, El Cebadal, and Buena Esperanza, can be found in the Tangua Development Plan 2016-2019, under a program called Potable Water and Basic Sanitation, created for improving the coverage and quality of sanitation and potable water services. The first three are land units below UF 5.1, and the latter is a land unit below UF 4.

Under the framework of participative councils from the former administration, 47 projects were executed with resources from the General Revenue-sharing System SGP 2010 – 2011, including the project named "Expansion of the water intake and sand trap for the aqueducts for Paramo, La Palizada, Marqueza Alto, Marqueza Bajo, Coba Negra, and Los Ajos." The above villages all belong to UF 5.1, except for Coba Negra.

In the Pasto Development Plan 2016-2019, under the Conservation and Sustainability Program for the territories, the goal is to acquire 100 hectares of land to be ecologically restored. Likewise, in the Dignified Housing program, the goal is to support 400 homes in the rural sector with complementary subsidies for construction and/or acquiring housing.

In the program for Infrastructure for Economic Inclusion in the Pasto 2016 – 2019 MDP, the goal is to improve 350 rural roads in the municipality of Pasto, for which monitoring must be carried out on those found in minor land units for Functional Unit 5.1.

Rural tourism is an opportunity for 17 townships in the Municipality of Pasto, such as Catambuco and Gualmatan, which have some of the projects minor land units, taking advantage of the beautiful scenery and strong food offering to generate income for the communities. An indicator is planned for 17 tourism sites in the townships that were improved and had signage installed.

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Magical Towns is an opportunity to refine mechanisms and channels for expressing the identity of every township, in order to integrate them with a cultural, artisanal, and food culture.

Huertecillas, Vocacional, and Gualmatan Alto are found in the Gualmatan township. The main attraction at Huertecillas is the scenery that draws many visitors, this being an opportunity to integrate the village into the magical towns project. At the minor land unit Vocacional, we can find beautiful scenery that is frequently visited by photographers. This makes it an opportunity to integrate the village into the magical towns project.

"The main tourism attraction for Gualmatan Alto is the Grotto of Our Lady of Lourdes, which is found 800 meters from the township center and its festival takes place on February 11 every year. A friar named Luis Felipe Gomez lived at this grotto and passed away in 2005. He promoted religion in the township by leading the religious acts for the Our Lady of Lourdes festivities. This site has preserved the cassock and rosary beads, and is well remembered by the region's inhabitants. A gorgeous garden with roses, espeletias, and swans that decorate the beautiful grotto". (culturapasto, 2001).

Given the above, the Gualmatan Alto village can draw tourism, for which Gualmatan is also known.

In Catambuco, where the villages of La Merced, Cubijan, and San Jose de Catambuco are found together with the Catambuco population center, the following aspects are noteworthy:

In Catambuco, the main tourist attraction is the Basilica of Our Lady of Guadalupe, located in the main square of Catambuco, which is visited by people from the region and other parts of Colombia.

The food that delights all of the inhabitants and visitors that come to Catambuco, includes traditional dishes from the region: barbecued cuy, and frito pastuso, with delicious Pasto potatoes and peanut aji.

In Cubijan, its namesake chapel was built by its inhabitants and is frequented by drivers passing through the area. Another attraction is the Laguna Negra footpaths, where visitors can enjoy the sounds of the flora and fauna.

Minor land unit La Merced is known for the spectacular scenery surrounding it.

"The San Jose Chapel can be found at San Jose de Catambuco, which was built by the community in 1993. The likeness of San Jose, highly important to the inhabitants, can be seen at the top of the chapel." (Timarán, 2001)

The project's minor land units belonging to the municipality of Pasto have tourism potential that is already being leveraged, as is the case of Catambuco; in accordance with the region's tourism development plan, the municipality's plan, and their development trends.

Productive chains with regard to the region's economic dynamics.

The information provided by community leaders is deficient as far as productive chains; however, it can be deduced that said information was obtained to develop the economic component in minor land units.

A qualitative analysis was done between the main economic activity, the main production destination, and the trade activities of the village. The main economic activities are agriculture and cattle breeding, the destination of the products is self-consumption and when there is a production surplus, it is traded through intermediaries or on the local market. Prices are subject to the laws of supply and demand, as a basic principle of a market economy.

That is, they fulfill the role of food suppliers for domestic markets as the first link in the productive chain. However, the processes for transformation and the production of intermediate and final goods for subsequent trade are not being carried out. Therefore, no added value is being generated for agricultural products, which would allow for higher profits to farmers that make a living from agricultural activities.

In the minor land units of El Tambor, La Palizada, Cubijan Alto, and Marqueza Bajo, cattle breeding is the most important activity, for which there is a double purpose,



namely, beef and milk. Cattle breeding is second in importance after agriculture at the minor land units of El Cebadal, El Paramo, Marqueza Alto, Chavez, La Merced, San Jose de Catambuco, Vocacional, Huertecillas, Gualmatan Alto, and Cubija Bajo. That is, milk (supply provision) in the milk productive chain is provided by the UF 5.1 villages, which is processed by companies in the northern part of the country. There are two companies located within the area of influence that produce milk derivatives that are traded in the local and regional markets: the first in Marqueza Alto, Cobra Negra sector, called Lacteos La Victoria, and the second in Catambuco called Lacteos Andinos. That is, the milk productive chain is completed in these villages. As for beef, there is a supply destined for wholesale trade, which is provided by the stakeholders in charge of trading beef with the link in the retail chain, and said link is comprised of stakeholders in charge of trading beef by cuts directly with the final consumer.

Considering that trade is the main economic activity of Catambuco, and restaurants form part of its commercial establishments, the source and destination or final link in the guinea pig and pork productive chains is recognized for this minor land unit, given that guinea pigs and pigs are bred in the village, as well as in other UF 5 villages (supply provision), and the destination is restaurants in Catambuco as well as in other minor land units where two traditional dishes are sold, namely, barbecued cuy with potatoes and frito pastuso.

In the other minor land units, according to the information provided by community leaders, productive chains are not representative because they have not been associated with the main economic activities that generate income.

Due to this, one of the strategic objectives of the Nariño Regional Competitive Plan is to strengthen the existing productive chains with prioritized projects such as the strengthening of the coffee productive chain in the Department of Nariño. Representing an opportunity in villages where coffee is grown, for the purpose of creating a productive chain.

Existing and projected infrastructure in municipal, departmental, and national development plans.

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The existing infrastructure is that which is described in the spatial component of the present study on the socioeconomic setting. The infrastructure projected for minor land units for Functional Unit 5.1, according to the municipal, departmental, and national development plans is as follows:

In the municipality of Tangua, the developable zones located within the city limits, in compliance with the zoning plan. The municipality currently has a low-income housing project with the Ministry of Housing, which is in the contracts stage.

"After the Government and private sector stakeholders announced the startup of the logistics module from the Intermodal Master Plan 2015 – 2035, the National Council of Economic and Social Policies (CONPES) approved a document that established the guidelines to change the tertiary roads network in the coming years. CONPES 3857, which took into account certain suggestions made by the Colombian Chamber of Infrastructure (CCI), may be considered as a first step to improve connectivity for rural areas. This will be a key tool in transforming the field and consolidating peace." (Cámara colombiana de Infraestructura, 2016)

The project for the second phase of the Potable Water Supply Plant, "Quebrada de Piedras", is within the area of influence of the Rumichaca – Pasto double lane road project, because treatment plant for potable water is in Catambuco. The importance lies in the fact that while the project has a high social impact due to the benefit it provides to thousands of the rural and urban inhabitants, a connection must be established between the project executors to avoid any interruptions in the potable water service for the population.

Projected infrastructure in Pasto, although it is not specified in the UF 5.1 minor land units, is related to the activities carried out between agreements and public/private partnerships to build a new central market, a logistics, trade, and technology center, and the industrial park. Also, the activities carried out for public-private enterprise start-up to supply residential gas, and the construction of the gas pipeline and polyduct.

The pact on inclusive local economic development contributes to the national cross-functional strategy for field transformation, as it identifies programs to aid in the comprehensive transformation of rural areas in Colombia, supporting women's economic empowerment in the fields, entrepreneurship and income generation, with

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support to economic infrastructure such as rural roads, market centers, municipal market centers, town markets, and irrigation infrastructure; all of this under the support framework for sustainable, agro-ecological, and equal rurality, supported by rural youth entrepreneurship, technical assistance, applied research, and rural property formalization, contributing to the national goal of achieving comprehensive transformation in the Colombian fields.

#### Poles for development and/or enclave

Of the Functional Unit 5.1 minor land units, the ones with the highest possibilities of being a pole for development is the Catambuco minor land unit, due to its characteristics as a site for tourism, trade, and food interests. As previously stated, it has a basilica that is over 100 years old as one of the main tourist attractions; conversely, the Catambuco population center has the highest population with regard to other minor land units under UF 5.1, as well as commercial establishments, restaurants with traditional Nariño dishes, achieving municipal and departmental recognition.

#### Trade Structure, marketing networks

At the El Cebadal village, corn, potato, bean, pea, wheat, and barley crops are sold to intermediaries. Two stores and one telephone–internet booth comprise all of the commercial establishments.

The destination for agricultural production in the Chavez village is the sale to intermediaries and village sales. They grow certain products for self-consumption in their home gardens. See Image 5.3.109. Cabbage crops in Chavez, Tangua. There is only one commercial establishment, which is a store.



Image 5.3.94. Cabbage crops in Chavez, Tangua  
Planar coordinates. Magna Origin Colombia West  
N 613573,6308 – E 967056,102  
Source (Géminis Consultores Ambientales S.A.S, 2016)

At El Tambor, products such as potato, corn, peas, and others such as fava beans are destined for sale to intermediaries and village sales. There are four stores that comprise all of the existing commercial establishments in the village.

At El Paramo, agricultural products are not sold to intermediaries. There are two stores that comprise all of the existing commercial establishments in the village.

At La Palizada, potato is destined for sale to intermediaries and village sales. There are five stores that comprise all of the existing commercial establishments in the village.

At Marqueza Bajo, potato is sold to intermediaries and grass is sold in the village. There is only one commercial establishment, which is a store.

At Los Ajos, the most significant crop is potato, and it is sold to intermediaries. There are three stores that comprise all of the existing commercial establishments in the village.

At Marqueza Alto, the most significant crop is potato, and it is sold to intermediaries.

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At Gualmatan Alto, the destination for potato production is the sale to intermediaries and village sales; vegetable production is for intermediary sales. There are three stores that comprise the commercial establishments.

At Vocacional, vegetable and potato production is destined for intermediary sales, peas are for village sales. There are no commercial establishments in the village.

At Cubijan, potato is sold to intermediaries and in the city of Pasto. Four stores and one telephone–internet booth comprise all of the commercial establishments in the village.

At La Merced, potato production is for intermediary sales. There are three stores that comprise the commercial establishments.

At San Jose de Catatumbo, most of the crops consist of potatoes, which are destined for intermediary sales. Vegetable production is also destined for intermediary sales. There are three stores that comprise the commercial establishments.

At Catambuco, potato and vegetable production is destined for intermediary sales and village sales. Commercial establishments consist of 70 stores, 50 general stores, 5 pharmacies, 5 bars, and 20 telephone – internet booths. See Image 5.3.110



Image 5.3.95. Commercial activities in Catambuco – Pasto  
Planar coordinates Magna Origin Colombia West

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N 624919,611 E 976890,074

Source (Géminis Consultores Ambientales, S.A.S. 2016)

At Huertecillas, most crops consist of vegetables, which are destined for intermediary sales and village sales. The only commercial establishment in the village is one store.

Productive companies in Primary, Secondary, and Tertiary sectors

A distribution was made according to the economic sector for land units in Functional Unit 5.1. In order to determine the percentage, information on the main economic activities was used, as found in the village data sheet; it contains an option for order of importance. This information is compared with the percentage of income for this activity, which is found in the village data sheet under the question on sources of employment in the village and/or neighborhood. That is why at the minor land units of El Cebadal and El Tambor, for example, they only carry out activities from the primary sector, therefore the percentage assigned to this sector is 100%.

Representation for the secondary sector is low, only for the villages of Chavez, Los Ajos, Cubijan, and Catambuco. The primary sector is the most representative for the minor land units of El Cebadal, El Tambor, El Paramo, La Palizada, Marqueza Alto, Marqueza Bajo, La Merced, Vocacional, Huertecillas, San Jose de Catambuco, Gualmatan Alto, Cubijan, and Figure 5.3.81

Table 5.3.37: Economic Sector Distribution in minor land units for Functional Unit 5.1

Minor land unit	ECONOMIC SECTOR		
	Primary	Secondary	Tertiary
El Cebadal	100%	-	-
Chavez	90%	10%	-
Tambor	100%	-	-
El Paramo	100%	-	-
La Palizada	100%	-	-
Marqueza Bajo	100%	-	-

Los Ajos	95%	5%	-
Marqueza Alto	100%	-	-
Gualmatan Alto	100%	-	-
Vocacional	100%	-	-
Cubijan Alto	100%	-	-
Cubijan Bajo	93%	5%	2%
La Merced	100%	-	-
San Jose de Catambuco	100%	-	-
Catambuco	23%	15%	62%
Huertecillas	100%	-	-

Source (Géminis Consultores Ambientales S.A.S, 2016)

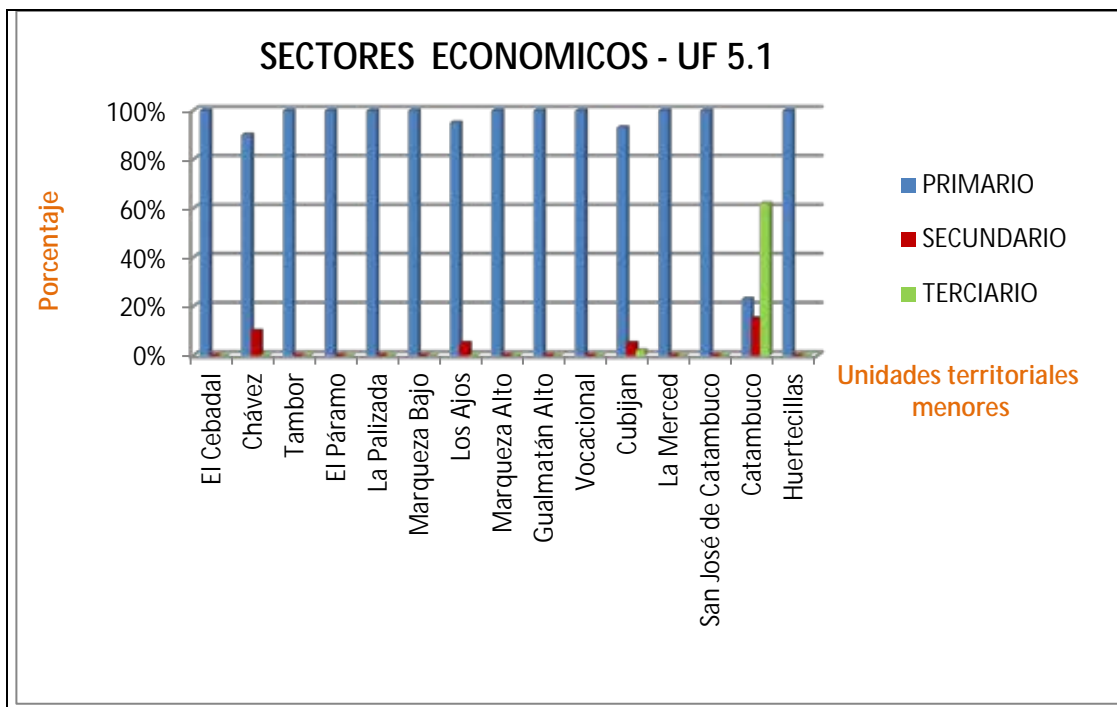


Figure.5.3.79 Economic Sector Distribution for minor land units for UF 5.1

Source (Géminis Consultores Ambientales S.A.S, 2016)

The tertiary sector is representative in the Catambuco land unit. The food delights all of the inhabitants and visitors that come to Catambuco, offering traditional dishes from the region: barbecued cuy, and frito pastuso, with delicious Pasto potatoes and peanut aji. See Image 5.3.111



Image 5.3.96: Commercial activities in Catambuco – Pasto Planar coordinates. Magna Origin Colombia West  
E 624919,611 N 976890,074  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

The distribution by economic sector for minor land units in UF 5.1 is predominantly for the primary sector; that is, matters relating to the economic activities of agriculture and cattle breeding; the tertiary sector is only predominant over the others in Catambuco. However, the predominant average income level for families in minor land units does not exceed the standing minimum wage, which indicates that these economic activities provide resources for family livelihood. Consequently, and agricultural production model is needed based on associativity, efficiency, job creation, and wealth.

Comprehensive economic analysis of the area of influence

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In order to perform a comprehensive analysis of the area of influence, the main aspects of the economic component will be considered for the minor land units in their respective municipalities.

The Ownership Structure for the land in Minor Land Units is mainly smallholdings, given that the prevailing plots below 5 hectares prevail. Cases were also determined for Minor Land Units where plots below one hectare prevail.

One of the characteristics seen in the economic sector in the department of Nariño, and focusing on the Pedregal – Catambuco sector is that crops are planted in smaller land areas; that is, in a smallholding. Therefore it can be inferred that the harvest of the aforementioned crops is determined by self-consumption and in certain cases are sold to intermediaries and/or village sales, which form part of the trade chain, with greater benefits than those of producers. However, it is not major income so as to allow for trading their products in large quantities or using more sophisticated techniques to work the land.

It could be said that some properties where agricultural activities are carried might be needed for executing the road project. Therefore there would be a modification to the economic activity that the owners and their families have established on said properties. However, support is planned the community in the area of influence through social management programs and handling measures under the concessionaire Vial Union del Sur, established to find prosperous economic alternatives that aid in improving the population's quality of life.

Moreover, when ownership predominates, the right to decide on how the land is used becomes consolidated, be it for grazing, or to decide what crops should be planted, and to gain financial benefit from the sale of crops. The right to sell or mortgage land, to transfer it to others through inheritance, or to create a leasing or sharecrop mechanism that recognizes the right of the lessee or sharecropper to use the land under pre-established conditions. The inhabitants of minor land units from functional units 4 and 5.1 retain such rights, due to the condition of ownership being predominant. The graph shows land ownership in Minor Land Units, where there is low representation of owners, lessees, or other forms of land ownership. See Figure 5.3.82 and table 5.3.54.

**Table 5.3.38 Land ownership in the UF 4 and 5.1 area of influence by municipality**

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MUNICIPALITY	LAND OWNERSHIP				
	Associative	Owner	Holder	Rent	Other
Imues	0%	91,25%	6,25%	2,5%	0%
Yacuanquer	0%	90%	5%	0%	5%
Tangua	0%	93%	2%	5%	0%
Pasto	0%	88%	3%	9%	0%

Source (Géminis Consultores Ambientales, S.A.S. 2016)

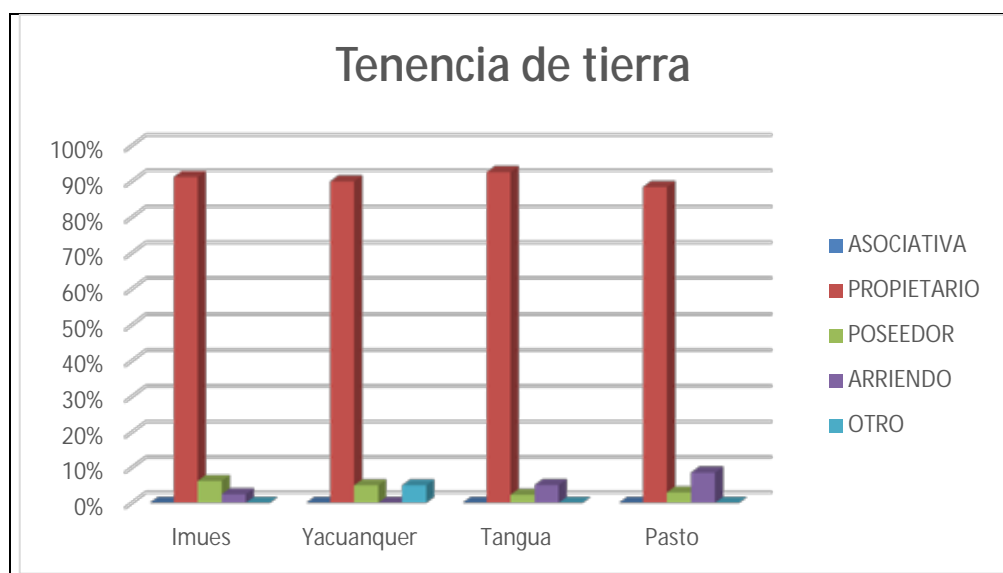


Figure 5.3.80 Land ownership in the UF 4 and 5.1 area of influence by municipality  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

Regarding the distribution by economic sector, the one with the most representation is the primary sector, followed by the tertiary sector, mainly in minor land units for the municipalities of Imues and Pasto. See Figure 5.3.83 and table 5.3.55.

The primary sector is emphasized in the area of influence, with representation by the tertiary sector in minor land units in the municipalities of Imues and Pasto; the secondary sector only has minimal representation in the municipality of Pasto. In order to create the following distribution table and graph by economic sector in the UF 4 and

UF 5.1 area of influence, minor land units were grouped by municipality, so that the data from the municipality of Imues is the same as that for minor land unit El Pedregal, given that the latter only belongs to this municipality in the area of influence; the information for the municipality of Yacuanquer corresponds to is villages Inantas Alto and Inantas Bajo, and likewise for the other two municipalities.

Table 5.3.39 Distribution by economic sector  
UF 4 and 5.1 area of influence by municipality

Municipality	ECONOMIC SECTOR		
	Primary	Secondary	Tertiary
Imues	10%	0%	90%
Yacuanquer	100%	0%	0%
Tangua	98%	1%	1%
Pasto	88%	3%	9%

Source (Géminis Consultores Ambientales S.A.S., 2016)

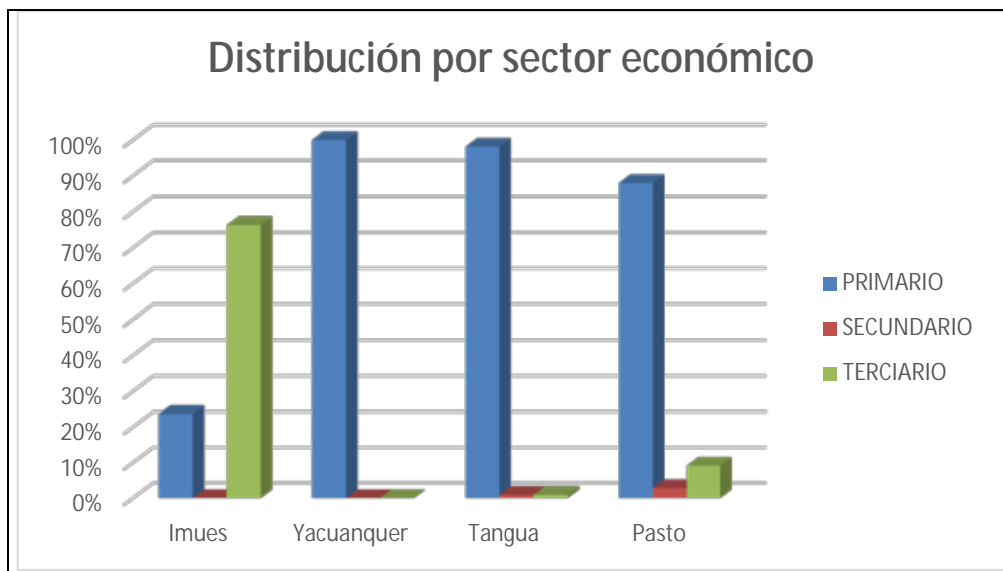


Figure 5.3.81 Distribution by economic sector area of influence UF 4 and 5.1 by municipality

Source (Géminis Consultores Ambientales, S.A.S. 2016)

The characteristics of the primary sector in the area of influence are as follows:

The primary sector has a predominant percentage in land units in the area of influence. That is, they mainly work in agriculture and cattle breeding, which generates average family incomes that are not above the minimum wage, which shows that the economic activities that they carry out only generate subsistence incomes for families; considering that on average, people have families of 4 people, it limits the capacity to meet the basic needs for the entire family group.

Table 5.3.40 Average family income area of influence UF 4 and 5.1 by municipality

MUNICIPALITIES	BELOW 1 MINIMUM WAGE	BETWEEN 1 AND 2 MW	BETWEEN 2 AND 3 MW	NO INCOME
Imues	70%	20%	10%	0%
Yacuanquer	100%	0%	0%	0%
Tangua	87%	10%	0%	3%
Pasto	85%	13%	0%	2%

Source (Géminis Consultores Ambientales, S.A.S. 2016)

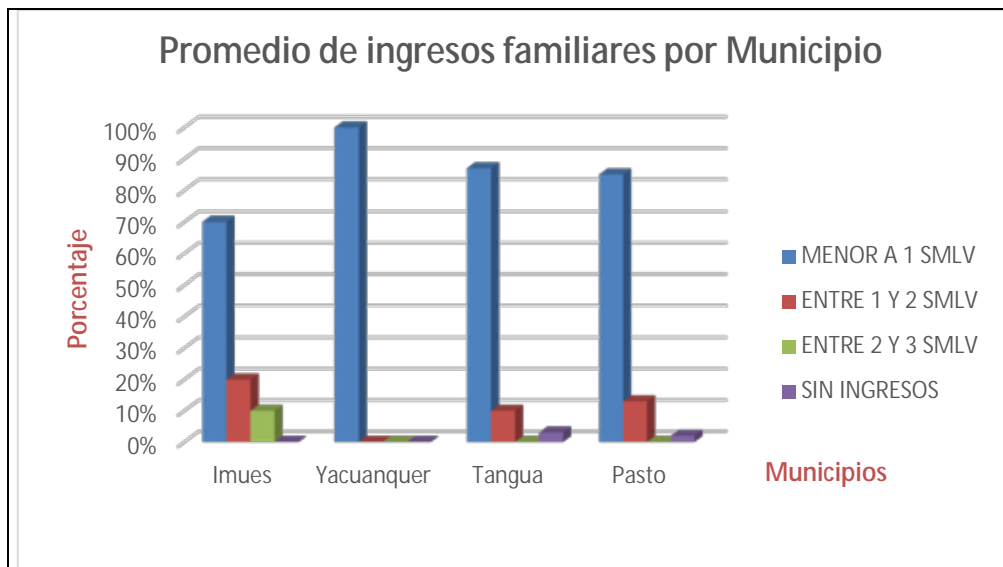


Figure 5.3.82 Average family income by municipality

Source (Géminis Consultores Ambientales S.A.S., 2016)

Agricultural production. Due to the weather conditions in the minor land units of Imues, agricultural production mainly consists of coffee, beans, and citrus fruit.

In the minor land units of Tangua, the agricultural production of potatoes, beans, onions, peas, and coffee represents a significant percentage in the planted area.

In the minor land units of Yacuanquer, the agricultural production of coffee, beans, and onions represents a significant percentage in the planted area.

In the minor land units of Pasto, the agricultural production of vegetables, potatoes, and grass represents a significant percentage in the planted area.

Coffee and beans are the agricultural products that stand out due to their percentage of planted area in minor land units in the area of influence, which shows that the trend is for producers to become interested in programs that government entities carry out to increase family incomes when their agricultural activity consists mainly of these products.

One of the strategic objectives of the Nariño Regional Competitive Plan is to strengthen the existing productive chains with prioritized projects such as the strengthening of the coffee productive chain in the Department of Nariño. Given that its flavor is increasingly gaining strength in the world market, as stated in the following article from the El Espectador newspaper, "When a customer walks into Starbucks on Times Square (New York) and orders a Nariño Supremo coffee, they might not imagine the process behind this product in the area around the Galeras volcano, and might not know how many people are behind a cup that is envied by major coffee producers worldwide: medium body, pronounced acidity, and citric aromas influenced by volcanic soil where the coffee plantations grow." (Sandoval Duarte, Hector, 2016)

In order to have coffee producers benefit from enhancing this productive chain under the Nariño Regional Competitiveness Plan, communications, associativity, community leadership, and institutional connectivity must be promoted, as they drive the coffee productive chain in the department of Nariño.

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Livestock production. Cattle activity is mostly seen in the municipality of Tangua, in the minor land units of El Tambor, La Palizada, and Marqueza Bajo holds first place in importance; for the three, cattle has two destinations.

Cattle breeding is second in importance after agriculture at the minor land units of El Vergel, La Buena Esperanza, San Pedro Obraje, El Cebadal, El Paramo, Marqueza Alto, Chavez in the municipality of Tangua; La Merced, San Jose de Catambuco, Vocacional, Huertecillas, Gualmatan Alto, and Cubijan in the municipality of Pasto. That is, cattle activity stands out in the minor land units of the municipalities of Tangua and Pasto.

Cattle breeding is not considered to be one of the main activities in the minor land units in the municipalities of Imues and Yacuanquer.

In minor land units, species such as pigs, guinea pigs, and hens are raised. Horses and rabbits in lower amounts.

The characteristics of the tertiary sector in the area of influence are as follows:

It is represented in minor land units in the municipality of Imues by commercial activities that are carried out in the Pedregal population center, in the Catambuco population center in the municipality of Pasto, and in points outside the Panamerican Highway or throughout the area of influence. In general terms, the commercial establishments that exist in the minor land units vary between 1 to 4 stores; some have telephone – internet booths. The inhabitants that carry out commercial activities usually outfit their homes to sell fruit, and to provide restaurant, cafeteria, and store services. Regarding the El Pedregal population center, in the municipality of Imues, this is where one of the commercial activities with the highest representation for the Pedregal – Catambuco section is seen, due to its strategic location where important national and departmental roads come together, such as: the Panamerican Highway that connects Pasto to Ipiales and the country of Ecuador, the road to the Tumaco maritime port and other municipalities in the Department of Nariño.

Therefore, a large amount of transitory population comes together in El Pedregal while traveling to their final destinations, using the various services and products offered

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there such as restaurants, cafeterias, stores, office supply stores, telephone services, tire repair shops, and others.

Over time, this activity has become an economic alternative that seeks to improve the income of the population in the El Pedregal population center; showing that 70% of families in El Pedregal have incomes below 1 minimum wage, 20% of families between 1 and 2 minimum wages, and 10% of families between 2 and 3 minimum wages; also 3 or more people contribute to family incomes.

This shows that economic activities such as trade and tourism as carried out by families in these minor land units, provide higher incomes than other activities.

Now, the layout proposed for the construction of the Rumichaca–Pasto two lane road does not intervene in this population center, given that it passes by one of its sides. Thus, vehicles heading to the southern part of the department of Nariño would not pass through the location of the commercial establishments in El Pedregal, but rather would continue on directly toward their various destinations. Therefore, the construction of the two-lane road would not significantly affect the infrastructure of said commercial establishments, but there would possibly be somewhat of a reduction in the sale of products and rendering of services on the economic level. However, anyone who wishes to do so, can enter the population center to acquire its offerings.

However, it must be made clear that the vehicles heading toward the road that leads to Tumaco must necessarily pass through El Pedregal. Thus, the economic activities already present in the population center will continue to develop.

Another economic activity with representation in this sector is tourism, due to the weather characteristics and scenic views of the minor land units located mainly in the municipality of Imues (UF4). To the population settled in this area, tourism represents job creation and therefore economic incomes, thus becoming an economic axis for development that is planning on being optimized with the construction of the Rumichaca – Pasto two lane road.

In the minor lane unit of Catambuco in the municipality of Pasto (UF 5.1), its main tourism attraction is the Basilica of Our Lady of Guadalupe, built over 100 years ago, and located in the main square of the Catambuco population center.

The food that delights all of the inhabitants and visitors that come to Catambuco, includes the traditional dish from the region: barbecued cuy, and frito pastuso, with delicious Pasto potatoes and peanut aji.

Also, throughout the Pedregal – Catambuco section, there are commercial activities being carried out on the shoulders of the road or the right of way; there are informal sales taking place on the road corridor at mobile stands (fruit sales), locksmiths, service stations, brickyards, and stores that over time have become an economic alternative that seeks to improve income for the population belonging to the settlements that are present in the area, who harness vehicle traffic to offer their products. Tradition is behind the strengths of these business. Many of them have perform their economic activities for years, precisely because of the ease with which customers have access to these businesses when they travel, given that they provide a service or sell products that users on the road need in their travels such as food, tire repair, and others. However, these roadside businesses are unsafe for clients or users as well as for the owners and salespeople, given that there is a high accident risk.

The construction of the Rumichaca – Pasto two lane road will adhere to Law 1228 of 2008, which determines the shoulders of the roads or right of way; therefore some productive units located on said shoulders must be relocated, which has an effect on their economy, because this activity is one of the means of livelihood for the population. However, the project also seeks to strengthen entrepreneurship in these productive units and support and monitoring will be provided to the Vial Union del Sur concessionaire through the institutional management capacity support program.

Now, the primary sector has a predominant percentage in land units in the area of influence. That is, they mainly work in agriculture and cattle breeding, which generates average family incomes that are not above the minimum wage, which shows that the economic activities that they carry out only generate subsistence incomes for families; considering that on average, people have families of 4 people, it limits the capacity to meet the basic needs for the entire family group. See Figure 5.35.3.85: Average family income area of influence UF 4 and 5.1



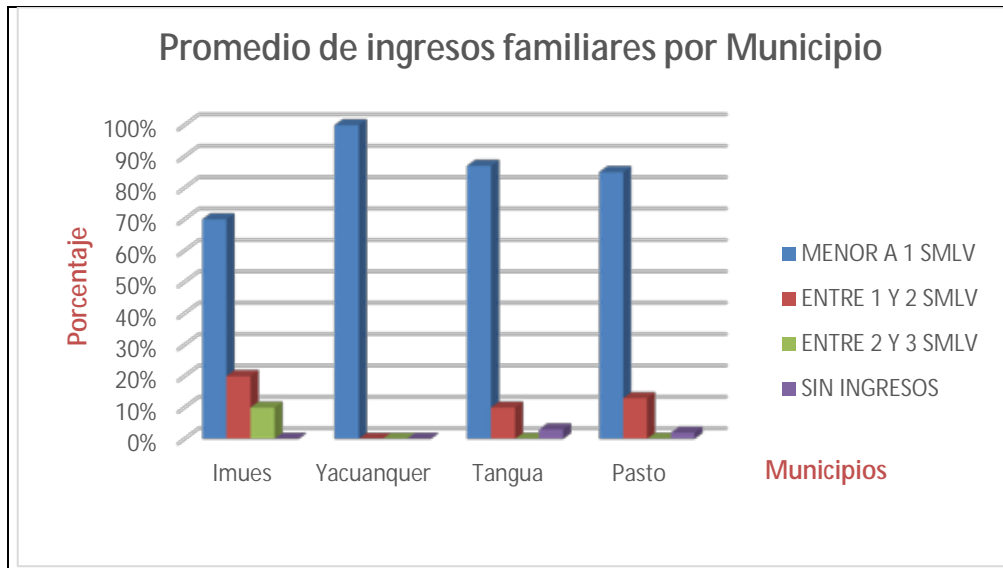


Figure 5.35.3.83: Average family income area of influence UF 4 and 5.1 by municipality Source (Géminis Consultores Ambientales, S.A.S. 2016)

The most representative sources of employment for minor land units are related with the main economic activities such as agriculture and cattle breeding, followed by trade and tourism. To a lesser degree other activities such as poultry farming.

Although the main economic activity for minor land units in the area of influence has been carried out under a specific outline given the conditions for ownership structure, land ownership, commercial structure and others, a great potential economic potential has been determined for this region, where the Rumichaca – Pasto double lane road will provide the connectivity needed to drive trade for agricultural products that supply local, regional, national, and international markets.

### 5.3.5 Cultural component

In order to describe the cultural aspects of a community, it must be stated that the term Culture is understood in many different ways by theorists in social and human sciences. Therefore we use the following concept as a starting point: culture is experienced and put into practice by the inhabitants of a particular territory, as they perceive meaning in

and provide content to what is understood to be cultural processes in the territories the inhabit. so the description of municipalities and villages in this document gathers social, economic, and historical aspects found throughout various sources that show everyday practices that are rooted in their identity and experienced through their ancestral and popular traditions.

The analysis done based on researching secondary sources that corroborate the findings in the field by way of surveys and interviews, some carried out by people from the community, who know the history, and who manage cultural and historic processes; it allows for building and preserving the history of the municipalities described herein. It must be taken into account that the municipalities (major land units) have a larger amount of information available for consultation, which is the opposite of what is found in villages (minor land units) where it has been difficult to gather data to create the document.

In order to gain more clarity on the concept of culture and with regard to the above, the definition proposed by Nelly Richard in her essay Academic globalization, cultural studies and Latin American critique is presented below, as published in the book "Estudios Latinoamericanos Sobre Cultura y Transformaciones Sociales En Tiempos De Globalización", (2001): "the word culture indicates different processes and activities whose definition varies according to the fields of resonance (the world of daily life, artistic and literary traditions, institutional and market policies, etc.), into which they are inserted to design symbolic and expressive manifestations that exceed the framework of productive rationality on economic and social matters. There would be an –extended– dimension of culture where this term would cover the set of exchanges of signs and values through which social groups represent themselves and to others, thus conveying their particular modes of identity and difference." (Richard, 2001).

The actions carried out by people on a daily basis in their inhabited space provide content and meaning to what might be understood as culture in that same geographical setting, where the elements of territory, identity, and forms of knowledge converge; in summary, culture can be described as the meeting grounds for man. Human beings are, and are permanently recreated therein. Culture is cumulative and slowly decanted; it is collective by definition. There is no individual culture, but rather individualized.

The cultural sector plays a major role in local communities' social development, in that it crosses all of the dimensions in a society; therefore, it is important to take into account the variables that the sector contains. Ever since the National Constitution of 1989, the cultural dimension has a specific space for the country's development, articles 70, 71, and 72 of the constitution make reference to the aspects of promoting and fostering culture by the government, is a basis for nationality, incentives and stimuli, and on cultural heritage as support for the national identity. Subsequent to the General Law on Culture (Law 397 of 1997 covers matters relating to the basic principles and definitions of culture and heritage, promotion, and stimuli for creation and cultural management; including the sector's organization through Municipal Culture Councils, as spaces community engagement).

According to Law 397 of 1997, culture and cultural heritage is to be understood as follows:

Culture is a set of distinctive, spiritual, material, intellectual, and emotional features that characterize human groups and covers, beyond arts and literature, ways of life, human rights, value systems, traditions and beliefs.

Cultural heritage of the Nation. The cultural heritage of the Nation is comprised of the cultural goods and values that are an expression of the Colombian nationality such as tradition, customs, and habits, as well as the set of immaterial and material, movable and immovable goods that possess a special historical, artistic, aesthetic, plastic, architectural, urban, archeological, environmental, ecological, linguistic, acoustic, musical, audiovisual, cinematographic, scientific, testimonial, documentary, literary, bibliographical, museological, anthropological interest, and the manifestations, products, and representations of the popular culture.

To conclude this brief introduction to the cultural dimension that is included in this document, and in order to better understand the territory being discussed, the following is an approximation of the department of Nariño in cultural terms.

#### The Department of Nariño

Nariño has invaluable historic wealth, described in detail by those in history, anthropology, sociology, archeology, and other social and human sciences, that allow for a reconstruction of history, as it is a land in which there are many findings that allow for

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understanding the material and immaterial cultural heritage, the latter being defined by Unesco as: "These material or living forms of cultural heritage cover living traditions or expressions inherited from our ancestors and conveyed to our descendants such as, oral traditions, theater arts, social practices, rites or festival celebrations, knowledge and practices relating to nature and the universe, and the knowledge and techniques needed for traditional handicrafts." (Unesco, 2009 ); which recreate a unique, symbolic, and memorable value to society, as Nariño is a department with a large set of cultural and aesthetic practices to Colombia, renown on a national and international level which, thanks to the work carried out by cultural heritage managers, serve as evidence and history for current and future generations in this region and throughout the entire world.

Its geographical location has been one of the main characteristics when compared on a national history level; the department of Nariño's proximity to the neighboring country of Ecuador has fostered multiple cultural manifestations that relate to this country, the delayed building of the Nation State in Colombia had an influence in having a greater identity with Ecuador in the times of colonization and war, where land disputes created an entire national movement in its defense that in a certain way withdrew it from the country for a long time; a withdrawal mainly due to the lack of connecting roads. However, with more roads, trade and industry, triggered by the Industrial Revolution in Colombia in the 30's under the administration of E. Olaya Herrera (1930-1943), along with the advent of the decade's liberal governments, the country entered into an age of modernization which fostered growth in the cities, as more manual labor was needed, but in turn began a deterioration process in the fields at the hands of landlordism, withdrawal from the fields, and other factors. It therefore become clear that the political relationship established from the periphery (the regions) with the center of the country (the capital) begins to transform based on the changes caused by the liberal government (Ramos, 1997).

Conversely, and going further back into historical facts, the government saw the need to act in a much stronger manner to generate a struggle in the defense of its territory through battles that took place at the time. "The Colombian-Ecuadorian Border Conflict refers to a series of land disputes that took place between Colombia and Ecuador during a period between 1830, with the breakup of Gran Colombia which left the border of both countries in limbo, and 1916, the year in which the common border was

definitively demarcated. The confrontation was made manifest through military means and diplomatic crisis." (Jaramillo, 1925).

The above is provided for the purpose of clarifying that Nariño has historic particularities, different from what took place in other regions, rich in nuance and full of events that circulate amongst narrators that give life to these events through a historical construction that has been written on it; it is worth noting that the work of Pedro Cieza De León, Daniel Zarama, Fray Antonio Burbano, Lydya Inés Muñoz Cordero, Alberto Quijano Guerrero, and many others have contributed to the history of this region, where the indigenous communities are the starting point for narrating the description, given the major cultural influence they have had for Nariño, Cauca, and Putumayo, regions that share various indigenous communities with their wealth of ancestral practices and beliefs which currently give an account of the cultural and symbolic value they reflect for the country and the set of indigenous ethnicities that inhabit the national territory.

With regard to the above, the following book is cited: Pasto: Espacio, Economía y Cultura (Ramos, 1997), in order to carry out a brief historical outline on Nariño, to clarify the way in which zoning took place at the time of colonization and that is seen in the structure of the zoning seen currently.

The internal spatial composition of Nariño has been barely influenced by external factors, given the limited relationship with national investment policies. For the observer, it is easier to see the pre-Columbian inheritance and the colonial dependence on Spain, whose processes mark the land with traditional spatial structures and forms.

In pre-Columbian times, Nariño is a land nuanced with various indigenous communities, each with a specific economic and social structure, settled in delimited zones but interlaced for coexistence. Although in remote times these groups came from elsewhere, bringing with them the foundation for socio-cultural progress, its development is spontaneous and therefore, comprise examples of indigenous zoning; that is, ways of appropriating space, that are expressed in an endogenous regionalization free of external influence (Ibiza, 1981)

The above means that the first regional organization came from indigenous zoning, which implies domain over a territory, production techniques, and cultural expressions that are closely related to the setting. The scope of this spatial organization is widely

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recognized by the first Spanish chroniclers of the 16th century and explained by contemporary researchers that have interpreted the territoriality of the Pastos and Quillacingas indigenous people and the various ecological and social practices that comprise it.

Toward the end of the 18th century, spontaneous colonization movements appear, protagonized mainly by mestizos that inhabit the "hot land"; that is, the inter-Andean strands that today constitute the coffee belt. The precarious nature of Spanish control in these marginalized areas is verified by the constant fleeing of indigenous people from the highlands. The report by Moreno and Escandon from February 1772 shows a continuous desertion of Indians from their towns and shelters, which makes the Crown and the Church reiterate their repressive policy of concentrating and moving manual labor and worshipers to ensure their mine and ranch operations.



Image 5.3.97 Natural terrace ruins outfitted for traditional crops.  
 Capulí village. Municipality of Imues  
 Planar Coordinates Origin Magna Sirgas West E 955177.534 –N 603637.542  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

With the aforementioned characteristics, the spatial structure of Nariño is seen as a process of discontinuous occupation due to the distances and difficulties of the landscape that also hinder communications. Consequently, within the territory there are no deep regional relationships but rather open commercial and cultural ties are

established, that each area creates and sustains independently. Thus, the south has close relationships with Ecuador; Pasto and Putumayo and the North; the la Cruz region with Valle del Cauca and Huila. Said isolation allows each area to preserve ancestral features, which makes Nariño a mosaic of climates and cultures where two main spaces stand out: The Coast, whose center is Barbacoa and Los Andes with the other economic centers of Tuquerres, Ipiales, and Pasto. The distance between these population and power centers, proportionally highlights the marginality of the surrounding territories and their degree of lag.

The founding of towns and the creation of foundational spaces is clearer in the Andean part of Nariño, where the mandate is imposed as an axis in the territorial zoning. This spatial order is associated with the creation of active administrative and economic centers such as Pasto, where a stately society prospers exploiting the indigenous workforce and designing a semi-feudal life structure. Civilian and ecclesiastical power design a deeply religious society, whose expressions of the material world in the geographic space is materialized through large cathedrals, convents, and massive mansions that dominate the landscape. Such is the role of Churches that culturally are seen as a "central location" from which the surrounding space is organized. In this zoning, the distance to the central locations constitutes a key variable, that associated with power in space, explains the logic with which forms are arranged on the landscape.

The isolation and governmental chaos factors contribute to creating a scenario that is ideal for local governments and the Church to perpetuate their privileges and manage their destinies in this region within the parameters of their interests without any censure. In these circumstances, Pasto becomes a realistic and clerical stronghold, synonymous with the most conservative sites in the history of Colombia.

By the republican age, the country exhibits a mosaic of isolated geographical regions where each maintains its own culture; that is, a continuum of unique social, economic, and political values. The only sample of national identity is the language and the religion, but each region preserves the socio-cultural order that underpins the federalist ideologies of the radicals and constitutionalists of Rionegro.

On the national scene, Nariño behaves as do the marginalized and peripheral areas; that is, there are no developments in the economic and social structure. The differentiated spaces are still underpinned on the basis of ancient indigenous territories, whose

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landscapes preserve a large part of the cultural, material, and spiritual history; while the sierra and the coast constitute two different landscapes that are completely decoupled, even within the Andean region, making it an odyssey to reach the western territories.

Under these circumstances, traditional ranches predominate beside a parcel economy of self-consumption, while the indigenous population continues to be tied to reservations, which hinders the establishment of capitalist forms of agricultural exploitation and denies the possibility of accumulation that allows for developing minimal infrastructure.

Leaping forward into national history, by 1930 Nariño was lacking a road to the center of the country, as the Pasto – Popayan road only existed in small, broken fragments that was only poorly completed in 1932 due to the war with Peru. This fact also reflects the ineptitude, clumsiness, and indolence of the political class in Pasto, whose political efforts had little or nothing offer to the progress of Nariño.

In conclusion, based on the comments by (Valencia) It can be said that the above indigenous spatial organization suffered a violent breakup with the presence of Spaniards, who expand the agrarian border, found cities, modify the organization of Indian towns, and establish a flow of products toward mining production settled on the Pacific coast, which will bring about a clearly connected economic space: the Barbacoas – Tuquerres axis, which integrates mining production with agrarian production. This zoning implies the development of towns in the cold highlands, but leaves spaces on warm lands that in the 18th century are occupied by mestizos that escape from the rigid controls exerted by the authorities and priests, which allows for a farmer populating process that is relatively self-sufficient.

The marginality and lack of interest in executing infrastructure works in the zone is emphasized, when considering that while Valle had steamboats, railroads, and highways to facilitate its exports, Nariño had just a few kilometers of isolated roads that were only connected due to the needs of the war with Peru, and not precisely to seek economic development or its integration with the rest of the country.

The authors show that since the foundation of a population in Valle de Atriz, a population process began that allowed for the rise of a colonial economy that exploited both native and European products, especially wheat, which would become the

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dominant production until it was surpassed by cattle. This was achieved thanks to the existence of a large indigenous population -the fourth in importance after Santafe, Tunja, and Quito- which would make parcels from Pasto have a higher number of tax revenues than those of the above cities. This allowed for consolidating the white elite which led to the displacement of the indigenous from the valley to the mountains, that fiercely controlled its parcels and took advantage of the city's geographical position, located at a mid-point on the road between Lima and Cartagena, to reproduce and perpetuate.

In the 20th century, the department of Nariño is an example of a stagnant period that is reflected in the image of colonial lag seen in towns and cities. In the case of Pasto, there is no urban expansion and the lack of public utilities offers an appearance of abandonment and untidiness. Regarding economic matters, the only point that stands out is the artisanal aspect, that does not show many changes with regard to the 19th century; however, the idea of a self-sufficient region continues to be seen. This autarky is broken down in Tuquerres, thanks to the active trade with Barbacoas and Tumaco, and in Ipiales where significant wool textiles are developed.

The creation of the Department does not substantially change things, despite the efforts made to improve the situation, mainly with the creation of the Universidad de Nariño, and certain administrative reform, as the efforts are lost in the midst of politicking and corruption. Consequently, Nariño is marginalized from important infrastructure projects such as railroads, roads, and steam navigation that mainly seeks to facilitate exports, particularly coffee. The marginality and lag is seen in the unlikely fact that in 1932 Pasto imports over a half a million pesos in textiles from Ecuador. However, slow transformations are seen such as the start of the banking system and a slow rise toward food and beverage industries, although the strength of the traditional ranch and small retail stores is still noticeable. Likewise, the supply of wheat flour is imposed on the factories in Cali as the dominant economic activity.

The Department of Nariño was created by the ministry with Law 1 of August 6, 1904, with regions segregated into the former department of Cauca, with Pasto as its capital. This law was sanctioned by President Jose Manuel Marroquin (1900-1904) on the last day of his administration. General Rafael Reyes (1904-1909) as president of the Republic appointed Don Julian Bucheli Ayerbe as his first governor, who took office on October 18, 1904 before Don Jose Maria Navarrete, President of the Court of the South.

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One of his main achievements was the creation of Universidad de Nariño (November 7, 1904).

The creation of the Department of Nariño was not done free of charge. It was the result of hard, collective, and historical efforts by the inhabitants of Nariño and its name is an homage to the Precursor to independence, Don Antonio Nariño.

Conversely, these are the main cultural manifestations in Nariño:

#### Folklore:

The man of the Andean Region is the product of the merger between two primordial ethnic and cultural elements: the indigenous and the Spanish. This is why the Andean man has a mestizo cultural essence. The double Hispanic – native identity is reflected in the forms of acculturation on Andean lands. There, the levels considered for this historical – cultural process are met: acceptance, reaction, and adaptation.

#### Arts and crafts:

"Manual arts and crafts require arduous labor and extreme care to obtain results with a particular aesthetic quality. Due to its origin, it is work that has been passed down from parent to child with its various, often times secret or carefully reserved, techniques or procedures, that constitute one of the occupational, immaterial, cultural legacies of many municipalities and villages in Nariño." (Espinosa, 1997).

From times immemorial, the dwellers of these regions left authoritative testimonials about their creation capacity in all types of handicrafts. They did not settle for imitating others in a trend toward mass production, but instead sought their own rules with which to identify themselves. Thus, in territories in Pasto and Quillacingas, since Pre-Hispanic times, the unmistakable and valuable designs with ornamental motifs and anthropomorphic and zoomorphic representations, or those with prehistoric and lytic symbology or the warp of textiles that have come to us in a fragmented manner, have been preserved in the dilated orbit of consumer goods creation destined for the gods and chieftains, always worshiping the impetus of its aesthetic moodiness.

"Handicrafts are present throughout the spheres of everyday life: in sacred, domestic, and of course recreational matters. Therefore, possibly, the best time in which to admire the exalted work of artisans in the Department is during the Blacks and Whites Carnival.

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In the carriages, troupes, individual costumes, in every motif or detail, one can see the delicacy of the finishes, the magic of the colors, and the peculiar ingenuity of our artisans." (Zúñiga, E., 2007)

Among the most popular handicrafts in Nariño is one of the most renowned worldwide, Mopa or the Pasto Varnish, its origins can be traced back to Pre-Columbian times, where they adorn palaces in Europe, especially in Spain and France. Basketwork, calvary ceramic, embroidery, looms, stone carvings, handicrafts in fique, leather, wood, migajon, yarn, and fabrics, among many others that have been appearing in the artisanal practices of the people of Nariño.

#### Paintings:

Nariño stands out on the international level due to the major creation capacity of its artists, inspired by the geography around them, mountains, volcanoes, snow-covered mountains, lagoons, and deep canyons are a source of their inspiration. Artists in Nariño stand out due to their immense industriousness and sensitivity, underscored in poetic, plastic, and musical matters.

Painters depict the spectacle of their dawns and the iridescent shadows of their afternoons on their canvases. Their source of inspiration does not lie solely in the bucolic, the rugged, and the pastoral, but is also found in man: the afro, the indian, the mestizo, the mulato, and the white, in his daily matters or in his carnival delights.

Regionally, artists exhibit a libertarian spirit, open to the trends of contemporary paintings. Therefore, the works from the most renowned artists are exhibited in the main galleries of the Americas and Europe.

#### Qhapaq Ñan

Andean Road System. Colombia – Cultural Heritage of Nariño

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Image 5.3.98 The Inca Punto Trail. Guapuscal Bajo Section  
 Planar Coordinates Magna Origin Colombia  
 E 960539.022 - N 608101.564  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

The Qhapaq Ñan, Andean road system, is over 6,000 Kms and includes a complex network of over 23,000 Kms. from the southwestern border of Colombia, to the south-central zone of Chile, passing through Ecuador, Peru, Bolivia, and Argentina.

The roads that crossed the Andes for over 1,000 years were connected over time by various cultures such as the Tiawanaco, Wari, Caranques, Quilmes, Atacameños, and others. Since the 6th century in southwestern Colombia, the Pastos connected their land with roads and with the ethnic groups that inhabited both the northern and the southern areas of the Andes mountains.

The Qhapaq Ñan was built according to the topography of various regions such as the puna, the highlands, the inter-Andean valleys, the watershed towards the Amazon jungle, the coastal desert, the passage heights at over 4,000 meters, or the deep gorges of the rivers that cross the Andes that seek the Pacific or Atlantic Oceans.

In the 15th and 16th centuries, the Incas improved the trail network, giving rise to the appearance of the Qhapaq Ñan or the Lord's Path; this system of roads connected the Tawantinsuyu or Inca Nation throughout the Andes mountains. The trails were improved to shorten distances, for the passage of numerous people or soldiers, to connect food production regions, or to have access to sacred sites.

With the arrival of Spanish conquistadors, the trails were used for a fast campaign of domination. Pizarro, Belalcazar, Almagro, and their armies arrived quickly to the Tawantinsuyu axes such as Cusco, Cajamarca, and Quito; the roads system became the so called "Royal Roads". During the early years of the republican period, the roads connected the regions of the new nations and were called national roads.

Highways replaced roads with the exception of the zones where they were not built, and they are currently the only roads for communication between communities. The Qhapaq Ñan roads in the department of Nariño are delimited by stone walls and rammed earth; they are living roads used by the communities for access to locations with housing, crops, and to municipal capitals.

**The Pastos in Qhapaq Ñan:**

The ethnicity of the Pastos has historically maintained a continuous flow of resources from different habitats. Between the 16th and 18th centuries, the chieftains had access to warm zones through the taxation of the members of the every ayllu and partiality, from one long-distance exchange network, and from the Mindales, or specialized merchants that paid taxes with sumptuary objects to their chieftains. In the 19th and 20th century product trade and bartering is emphasized, which ranged from the highlands of Ipiales to the warm lands of the Guaitara canyon and the Pacific Coast. Products were traded from cold environments such as tubers, lima beans, and cheeses, for coffee, brown sugar, cane syrup, and corn. Some people are merchants and buy and sell products from other climates, others forge familiar, friendly, or cronyism relationships.

Throughout their history, the Qhapaq Ñan have also united populations, processions, patron saint festivities, and carnivals. The pilgrimage that crosses the Andean Road System departs from Pasto toward the Sanctuary of Our Lady of Las Lajas during holy week.

The route of the Qhapaq Ñan, as seen today, is the same as that which was mentioned by Cieza de Leon but also, from Funes, the route to the left of the Guaitara river is included, which was and is also very much used by travelers. So the Qhapaq Ñan in Colombia departs from Pasto, borders the southwestern part of the Galeras Volcano, and follows the route of the Guaitara river on both sides, crossing the river only once to reach

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Rumichaca. According to the current administrative political division, it covers the municipalities of Pasto, Tangua, Yacuanquer, Funes, Puerres, Cordoba, Potosi, Iles, El Contadero, Gualmatan, Pupiales, and Ipiales. It must be taken into account that the central route is being used as a reference, ignoring the network of trails that connect the highlands of Tuquerres, the plains of the Pacific, and the Amazon.

The Qhapaq Ñan passes through countless landscapes in the highlands and the river canyons that are on its path, which changes depending on the time of year, marked by the preparation of the lands, the planting, maturity, and the harvesting of products such as potatoes, corn, wheat, and barley, among others.

Given the importance of this cultural asset, archaeological field survey activities determined that the construction activities of the project do not intervene in the existing sections of the Inca Trail or Qhapaq Ñan.

#### 5.3.5.1 Non-ethnic communities

##### Major Land Units

The following municipalities are Major Land Units: UF4 (Imues, Yacuanquer, Tangua), UF5.1 (Tangua and Pasto), about which the social, historical, economic, and environmental characteristics are mentioned to report on the cultural processes that took place in these territories in fulfillment of the objectives set forth to create this document.

##### Municipality of Imues

##### General analysis:

Ways of life, perspectives and relationships are covered here, in the setting that communities have in the area of influence of the Pedregal-Catambuco section of the Rumichaca-Pasto Road Project, specifically with regard to the municipality of Imues. This component focuses on culturally characterizing the non-ethnic communities, most inhabitants in the area are farmers and urban, so there is an emphasis on having the information match this type of population.

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With regard to the bibliography that was reviewed in creating this document, the Imues municipal development plan was taken into account, which contains valuable information to support the text presented herein.

According to the information from various development plans that have been executed for the municipality of Imues, regarding settlement patterns that according to economic, social and geographical, internal, and regional characteristics, the municipality has a direct, functional relationship with the center of Tuquerres and Guaitarilla, where a significant flow of commercial trade and services is developed. This shows broad participation in the economic development of these municipalities and in turn, the commercial and cultural exchange that is generated in the region based on agricultural trade mainly, and others that are traded in the municipality of Tuquerres (Alcaldía de Imues, 2012).

Also, with regard to the above description, the population in this municipality shows settlement patterns relating to the commercial and economic exchange carried out by the municipalities of Tuquerres and Guaitarilla, when considering that the population is necessarily located in these municipalities for the effective performance of their activities, and they form part of a process created over time, where the inhabitants have circulated from one municipality to another, sharing their products and also settling into the places where their economic level has the possibility of growing.

The municipality of Imues has an approximate area of 8,150.12 hectares, of which 5,620 are used for agriculture, as this is the most important economic activity in the municipality, with an agriculture where the predominant crops are: cereal (wheat, barley), peas, bush beans, onions, potato, tomato, and annual crops such as corn, and permanent crops such as fíjate. "The municipality of Imues, as most municipalities in the Department of Nariño, land distribution is characterized for being smallholdings, where approximately 38.44% of the total area has minor 5-hectare properties; from 5 to 20 hectares, an average percentage of 25.54% of owners; from 50 to 200 hectares a percentage of 7.42% of owners, and 200 hectares and more, 17.53%" (Alcaldía de Imues, 2012).

According to the above statistical data, land ownership currently allows for analyzing the farming economy with respect to the Family Agricultural Unit UAF, defined as an agricultural, livestock, forest, or aquaculture exploitation fund that directly or fundamentally depends on the family or hired work force, and whose extension has

been calculated for the various agro-ecological areas of the municipality, taking into account the local production technology, the sales costs of the products, and the production systems that the small producers in each zone in the municipality develop most often, thereby becoming an exploitation measure unit; the UAF is defined as the exploitation of a fund that mainly and directly depends on the connection of the work force in a family comprised of a head of household and their spouse or partner, as the case may be, or by relatives up to a second degree of consanguinity and one civil, and that also occasionally hires manual labor outside the family.

The family is this the main work nucleus, which is a symbol for cultural and historical identity in traditional farmer families, where their members help to work the land, care for animals, and sell products. It is also quite noticeable in the Nariño countryside that the work is not clearly defined between men and women, where it is plainly evident that daily agricultural practices are assumed by all members of the same family.

#### Historical facts:

Studies carried out by historians, notably Jose Vicente Dueñas Narvaez, in their compilations provided by the Casa de la Cultura del Municipio, historical synopsis, geography, social economy of the department of Nariño, and with certain information from the community, with regard to the foundation of Imues, "that it was founded in the 16th century, in the year 1572, according to the Departmental Statistical Plan of 1991-1992; we know that an indigenous population existed in the area of the current settlement..." Research allows for determining that the municipality of Imues was founded by chieftain Carlos Quiscualtud de Imues, of whom it is said that he arrived with his family to occupy this land as a strategic point due to its visibility in case of being attacked by his enemies, and this settlement had all of the comforts needed for daily life such as wood, water, and land suitable for agriculture. Historians narrate that the Old Trail of Bolivar, or the Royal Road, was the main access and communication route with neighboring towns. With the gradual arrival of other inhabitants, friends from neighboring towns around the Gaitara river named the Quillacingas, as in the case of Guaitarilla, Ancuya, Consaca, Yacuanquer, Tangua, Samaniego, Funes, Contadero, and others, the grand family of the chiefdom grew. Trade was done on foot, with mule trains

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between the neighboring towns of Tuquerres and Quillacingas de Guaitarilla, subsequently this trade consisting of fique package bartering (Guangas and Telares) for salt, brown sugar, gold, and other indispensable utensils for the time, extended into the cities of Pasto and Popayan.

In 1849, the municipality of Imues was considered to be province belonging to the municipality of Tuquerres, and since that date it was established as a municipality in the department of Nariño. Imues means "hidden water, and as the story goes, in the summer, people used leather and climbed the Cambutes mountain near las Vocanas, where there was spring and to avoid drought, they performed their respective rituals. According to the studies provided by the municipal archives, it was determined that the municipality of Imues has an Administrative Political division centered on 2 townships, 30 villages, and 9 Police Precincts (Imues, Alcaldia Municipal , 2016).

The historical construction that has been done in the municipality of Imues is determined based on considering the population decrease that has emigrated since 1993, and in the study the following causes were established for emigration from the location. Main cause: departure from the fields for agricultural activities due to a lack of water. Secondary and collateral causes: lack of opportunities in the region for which many families left to find economic horizons in other Nariño municipalities and other cities of Colombia and other locations in the neighboring country of Ecuador. The influence of climate change, affects the departure from the field coupled with the lack of economic opportunities and living conditions. The following is the chart on population variation showing the aforementioned numerical behavior.

Cultural symbols:

The culture of a people is the result of a historic process, where diverse aspects converge such as art, music, language, religion, customs, beliefs, ideas, ways of life, and traditions that provide an identity that is unique to its inhabitants. It is the duty of local governments to foster these multi-cultural expressions by developing infrastructure, research, education, endowment, organization, planning, and coordination with the respective institutions. In the municipality of Imues, culture is represented in ancestral domestic architecture (vernacular architecture); that is, with large houses built with mud walls (bareque) and covered in mud shingles, are some of the characteristics in certain homes located in various zones in the municipality, especially in the rural sector. Currently, its inhabitants are modernizing their homes with modern materials such as

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brick, concrete structures, covered with concrete slabs and cement asbestos shingles (Alcaldia de Imues, 2012)

#### Economic Traditions

The municipality of Imues is located 55 km from the capital of the department and 15 km from the municipality of Tuquerres, with which most of its commercial activity is had, as a result of agricultural production such as potato, peas, and milk products. It is located from 1600 to 3000 meters above sea level, making the municipality a welcoming and friendly place, where one can enjoy spectacular weather, fertility in its fields with various products, providing beautiful scenery in a mountain setting, exquisite food, and fantastic landscapes. With a variety of climates that range from temperate to impressive paramos (Imues, Alcaldia Municipal , 2016).

#### Traditional festivals

Embedded in its culture of traditional practices, festivals such as the following are celebrated: the municipality's patron festival held in June 3, 4, and 5, in honor of the municipality's patron saint, the Virgin of the Light; the Blacks and Whites Carnival; this tradition is observed throughout the department of Nariño, and every municipality has its own version. In the municipality of Imues, 13 religious activities are celebrated throughout the year, where cultural, artistic, and folkloric activities are carried out, where locals and tourists come together to especially observe the festival of the virgin, children's day, farmer's day, and the veneration of patron saints for every village. These events are held in the main square and sports venues. The meetings generate various expressions that identify each population group with their customs, this delving into the true sense of ancestral belonging and identity. During the celebration of the various cultural festivities, there is an opportunity for people to learn about the best musical, dance, traditional food, and cultural samples from various artisans during the popular verbenas (Alcaldia de Imues, 2012).

#### Artistic activities

The people of Imues have a deep religious devotion, especially for the image of the Lord of Great Power, and in his honor, they celebrate their patron saint with religious rites and cultural and artistic activities. The Blacks and Whites carnival is celebrated in Imues as well as in the neighboring villages. This is an opportunity to show and promote their artistic and cultural manifestations. A choreographic artistic tradition is the presence of 13 dance groups, comprised of students from various educational

institutions and centers, and the general community from the entire municipality. Its food is known for wheat arepas and the tortillas from Pedregal, that are had with coffee. Imues has a Musical Education School, with the Semillas de Paz Symphonic Orchestra, Bandas de Paz, and the Municipal Band School. The same is seen with the musical tradition in Nariño, with various artistic groups, and in Imues these groups are also present as folkloric music and guascarrilera music that is traditional for this region. Regarding guascarrilera music, in the municipality several departmental contests have been held, promoted by the Departmental Assembly of Nariño, where the director of this major event is Doctor Leonel Sanchez, a former lawmaker from the Departmental Duma. In the municipality, a pro culture stamp has introduced. It has a Public Library, with the Carlos Quiscualtud House of Culture, the Cambutes Archeological Museum, and the Theater of the Maria Luz Educational Institute also revolving around Industrias Culturales y Asociatividad, they have a Telefonía Compartel (Gobernacion de Nariño, 2011).



Image 5.3.99 Cambutes Memory Center. Municipality of Imues  
 Planar coordinates. Magna Origin Colombia West E 953339,086 – N 608533,599  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

### Cultural Heritage

The catalogued locations, according to its inhabitants, cultural heritage is: The Cambutes Memory Center, Puente Real in el Guaitara, Piedra de Simon Bolivar, the

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Bolivar Trail, Cambutes Mountain, Cerro Gordo, Santa Rosa Lake, the Chirristes Grotto, and religious temples.



Image 5.3.100 The Traditional House from the Republican age. Municipality of Imues Planar coordinates. Magna Origin Colombia  
E 953478,089– N 608421,787  
Source: (Géminis Consultores Ambientales S.A.S., 2016)

Traditional uses of natural resources:

As far as the use of the land is concerned, this constitutes one of the most important aspects of the physical-biotic analysis for zoning, given that the current degree and dynamic of the natural environmental intervention can be identified, classified, and mapped, as represented in the current state of vegetation cover. There are approximately 34 hectares of natural forests and 20 hectares of planted forests. The remaining hectares are for construction, natural grasslands, stubble, and non-productive zones with high slopes and boundaries (Alcaldía de Imues, 2012).

Cultural and traditional

With a strategic location, the Santa Rosa Lagoon is located in Imues, in the Santa Rosa village, 500 meters from the main road that leads to Tuquerres, a place with tourism potential, as well as La Chorrera, 600 meters from the municipal capital of Imues, it

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served as a main source of water for ancestors in the territory. Currently it is declared as a natural reserve in the municipality of Imues.

### Technologies

It must be said that climate change in natural phenomenon in the region has modified certain agricultural practices and planting and harvesting times have been changed due to this phenomenon, which has resulted in a change in planted products and in land use; these modifications include irrigation and greenhouses.

### Symbolic values

Imues is a mountainous municipality with some flat areas. From indigenous roots with stories and legends tied to nature and translated into rites such as that which is still celebrated in Cambutes Mountain to avoid drought. This mountain also has an archeological museum. Imues has Los Guayacanes Llano Verde Natural Reserve located in the Las Animas Village (Gobernacion de Nariño, 2011).

### Municipality of Yacuanquer

"Plain of idols or sepulchers" - "tomb of the gods" (Quechua)

According to the information gathered and analyzed in the documents of the 2012-2015 Development Plan in the Yacuanquer mayor's office, and the 10-year Culture Plan of Nariño 2011-2020, the required information is described for this document.

### General analysis:

Yacuanquer is a municipality of agricultural tradition and located in a wide variety of thermal layers that range from paramo to temperate weather, with a variety of products and minor species, and fish production; since it is also a mandatory route for the populations that come from the western part of the department to reach Pasto or move to the southern part of the department, there is a wide variety of restaurants and lodging to satisfy the needs for this demand. There are also plots with cabins and summer homes for the people of Pasto due to the proximity and temperate weather that is very pleasant in the municipal capital; with predominantly cold weather at altitudes of 3000 and 4300 meters above sea level covering 74% of the physiography, while 11% is paramo, and 22% average climate. Sixty-five percent of the topography is rugged and only 10% is flat (Alcaldía de Yacuanquer, 2012)

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With a farming tradition due to its location in a fertile area where various products can be planted such as potatoes, corn, wheat, fruit, and double purpose cattle, it is a very sought-after region for relocation by foreigners into this municipality; this is why there is a wide variety of neighborhoods inhabited by people from other cities, who somehow generate a certain type cultural mimicry with their host community; they also continue to preserve the cultural traditions of their places of origin, and by having established and adapted themselves to the social, economic, and cultural conditions of the municipality, they share them in what is known as cultural mimicry in anthropological mimicry.

#### Historical facts

Of the various accounts regarding the foundation of the municipality, apparently the most precise reports that Yacuanquer was founded by Lorenzo de Aldana in mid-October, 1539 in what is currently Valle de Huacanquer, which was the foundational sear of Villa Viciosa de la Concepción de Pasto, as the scenario for important events during the wars for independence such as: the battle in 1822 between royalist forces led by Remigio Bobes and the patriotic forces led by Generals Antonio Jose de Sucre and Arturo Sanders from Bolivar's army; the patriots were victorious, making it possible to take Pasto; however for the people of Yacuanquer the Venezuelan General Pedro Leon Torres had greater meaning, as he arrived in Yacuanquer after being wounded in the battle of Bombona and died at the La Estancia ranch. Today, Yacuanquer has the privilege of being the oldest town in the department of Nariño. By looking toward the first communities that inhabited the area where Yacuanquer is now settled, it was the Guacanquer indians of the Quillacinga family who settled in this region; the origin of the name Yacuanquer comes from the original occupants of these lands; it is a Quechua word that means "plains of the sepulchers" or the "tombs of the gods" (Alcaldía de Yacuanquer, 2012).

#### Cultural symbols

Yacuanquer is a municipality with great cultural, musical, and artistic wealth; expressions through which it has been recognized on a departmental, national, and international level. Thanks to the various presentations, exhibits, and interventions of their artisans, writers, musicians, attorneys, teachers, actors, dancers, and many others

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who, given their artistic and cultural capacity, have been worthy representatives and exhibitors for more demanding audiences.

Regarding the dialect, as with the rest of the department, there are particular forms of expression in the municipality, forms that are understood and seen as the people's way of being, where there are many terms from Quechua, that emphasize this place's accent **further**; also in common are numerous archaisms and multiple uses of the same word in a diverse context of assimilations and evolutions of meanings as well as many new terms.

#### Economic traditions

As with the structure of the department of Nariño, the municipality is characterized for being eminently agricultural, with a predominant farming economy, where most producers work in plots that are insufficient for providing work and incomes for a family. Therefore, they are obligated to work as temporary or permanent employees to obtain subsistence incomes that are complemented with agricultural production on the land itself (Alcaldía de Yacuanquer, 2012).

Cattle production action is oriented toward breeding minor species: guinea pigs, rabbits, chicken, and fish; likewise cattle and pork; in livestock, there are technical deficiencies regarding sanitation so as to contribute to the pollution of the environment.

Mining Exploitation: Although this mining work has been considered as a source of income for some families in the municipality, it has also become a threat due to the anti-technical manner in which it is done; this has created pressure on natural resources, and has destroyed sewer, energy, and telephone services in the La Estancia sector. The work of extracting sand is carried out using the underground excavation system for which, according to records by the Nariño Regional Autonomous Corporation, CORPONARIÑO, there were 41 mines in the entire municipality. (Alcaldía de Yacuanquer, 2016)

#### Artistic activities

In the Yacuanquer culture, there are highly representative activities such as: International Meeting on Folkloric Music and Dance (an event that takes place in October in commemoration of the municipality's anniversary), a meeting on Farmer Music (in June in homage to the Yacuanquer farmers), the year-end festivals (taking

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place in from December 16 to 31), in addition to the carnivals that take place from January 2 to 6 every year.

These are some of the most noteworthy compatriots in certain disciplines: Pedro Leon Torres School Band (Music); Carlos River Insuasty (Artisan); Arley Hernandez Ceballos (Dance) and Braulio Algiro Insuasty, Henry Edgardo Insuasty, Jose Edmundo Calvache (Teachers) and Luis Delfin Insuasty (INEM School Founding Teacher), among others.

#### Traditional festivals

Religious beliefs and customs speak of Yacuanquer as a mostly catholic municipality. However, in recent years, groups have sprung up belonging to other religions, such as protestants, christians, or evangelicals. This majority periodically holds various celebrations both in the urban and rural sectors, gathering the community to participate in cultural, artistic, and religious acts in homage to their respective patron saints, such as the celebration of Holy Week, the religious festival of the municipality in July in honor of Holy Mary Magdalene which is tied with the southwestern band meeting; the Christmas novena in commemoration of the birth of Jesus and the traditional festivals celebrated in the rural sector according to the patron saint of each village, which are mostly held with the support of the Municipal Administration through the House of Culture.

The activities carried out in the municipality include two that have a high social impact in that they have the power to gather the families of Yacuanquer to have fun and keep the cultural heritage alive, namely: One is the year-end festival that in turn has two components: The first is the calavera contest, a traditional dance done in the month of December every year during the Christmas novena. It involves gathering a group of no less than 60 friends and neighbors who, wearing old and traditional clothes, disguise themselves as the elderly, cucuruchos, guaguas, death, and demons; they go through the entire town starting on December 16 and dance for money until reaching the grand finale which is organized by the municipal administration and the house of culture on December 23, where on average 8 adult and 7 youth calaveras meet.

Prizes for the participants are provided by the Municipal Administration and all of the funds collected for each calavera is invested in trips, parties, or personal benefit. The second component is the Años Viejos parade, which is held December 31 every year, gathering artisans and participants of the municipality in the urban and rural fields,

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where their carriages, carts, and costumes of current events of personalities delight both locals and visitors. The second most important activity are the Carnivals that begin on January 2 with the selection and crowning of the Queen, the second, and third runners-up in the congeniality and beauty pageant with participants from neighborhoods and villages in the municipality. It continues until January 6 with daily activities and events such as these: January 3m carnavalito, January 4, the arrival of the Yacuanquer family, January 5, selection and crowning of the king of the ugly and the game of the blacks, a January 6, the main parade and game of the whites. These carnivals are mainly in the municipal capital and all of its days end with presentations by well-known international artists.

#### Architectural heritage

Regarding architectural heritage, the municipality of Yacuanquer maintains some of the features from colonial times such as the religious temple, the major symbol for architectural and cultural heritage for the municipality. The Santa Maria Magdalena church is romantic in style. Another important historical location is the "La Estancia" casona, or ranch. It must be said that this casona is private property; the municipality must begin the process of acquisition to be leveraged for tourism. There are also the "Liberator Trails", of which there are still several sections with pedestrian and animal traffic. There is also the Tacuaya historical bridge.

Since the municipality is in the Galeras Flora and Fauna reserve and forms part of the history of independence of Colombia, so it has become an important tourist attraction for the department, offering its visitors historical, architectural, and religious sites such as:

The Church of Santa Maria Magdalena de Yacuanquer: The Church of Santa Maria Magdalena, romantic in style, began construction in 1904 and was completed in 1920, under the guidance of Ecuadorian Farinango Suarez; during its construction, it suffered some damage due to seismic events caused by the eruption of the Galeras volcano in 1936, causing severe damage to the front of the church including the dome, steeple, and part of the choir. In 1945, reconstruction was done and resulted in a new octagonal body with a shed as a small steeple that differs from its original style in both form and style. During the construction of the church, three naves separated by round columns that sustain the ends of the mid-point arches.

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Image 5.3.101 The Church of Santa Maria Magdalena. Municipality of Yacuanquer  
 Planar coordinates. Magna Origin Colombia  
 E 963938,735 – N 615082,771  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

Tacuaya Bridge: The structure of the Tacuaya Bridge goes back to 1858, where there are three embedded plaques and was declared a Departmental Monument through ordinance No. 022 of November 20, 2001. This bridge has much meaning for Colombian history because that is where the patriot forces led by General Simon Bolivar had 14 couples from the upper echelons of Pasto killed, who had their hands and feet tied and then were thrown into the Guaitara River.

The Taindala Fields: a scenario for the liberation war. In the war for independence, on December 22, 1822, the fields of Taindala were the stage of a cruel battle between the patriot forces led by Venezuelan Arturo Sanders from Bolivar's army, and the royalist hosts commanded by Benito Bobee.

The Pedro Leon Torres Casona: In the village of La Estancia lies the casona where general Pedro Leon Torres died after being seriously injured in the battle of Bombona. This site is abandoned.



Image 5.3.102 The La Estancia Ranch. Municipality of Yacuanquer  
 Planar coordinates. Magna Origin Colombia  
 E 962885,599 – N 613996,584  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

#### Cultural infrastructure

One of the great strengths Yacuanquer has is the Public Library which operates in City Hall facilities and contains approximately 3,700 duly catalogued and organized publications, thanks to the permanent hiring of a librarian. It is complemented by the Virtual Library containing 25 laptop and desktop computers. These library spaces are used daily by no less than 100 visitors between students and non-students, registered in the system called "The key to knowledge", monitored and coordinated by the Ministry of Culture through the National Network of Public Libraries.

The municipality of Yacuanquer has the "Takiry" dance studio that is duly outfitted and built thanks to a cooperation agreement signed between the municipality and the Ministry of Culture. This studio is the main stage for rehearsals, developing and operating the dance school and other activities relating strictly to corporal expressions in all modalities and disciplines. Also, one of the alternate areas of this studio is used for the same purposes by the theater school. It is worth mentioning that there is no infrastructure or supplies needed for education work in fine and visual arts. All artistic and cultural activities are channeled through the House of Culture and are scheduled by the Municipal Culture Plan which is created for each government administration. Currently, the municipality has not duly updated this instrument; therefore, for the

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2016 – 2019 period it will be created in order to have this valuable tool for consultation and navigation in culture and arts available.

Other strengths of the municipality have to do with the existence of three levels of musical education represented in youth pre-band and band seedbeds operating together with the Pedro Leon Torres School Band, in which there is a baseline of 100 members, approximately. Four Bands of Peace: One in every educational institute and one in the education center of the Tasnaque village. "La Tropa" theater troupe, ascribed to the municipality's house of culture, with 25 members. Urban sector dance school with the Danzarte group (with 25 members) and a dance training group in the Chapacual village (15 members). Traditional Music school with an on-site teacher in guitar, charango, quena, zampoña, percussion, basic piano and other instruments, located in the urban sector with 40 students. The municipality of Yacuanquer has the "Yacuanquer Estereo 88.7 F.M." radio station, a public station whose main purpose is to serve as a channel between the municipal administration and the community. The Municipal Administration is associated through the direct hiring of the on-air staff needed for its operation. The House of Culture's other major responsibilities are related with promoting and consolidating community development and leadership, a component that plays a key role in the community and that in recent administrations has not been given the importance or the duties it deserves, while its only concern has been the creation of Community Action Boards, completely leaving aside its operation, education, training, inclusion, and permanent association with the municipal administration. Hence the priority for new Community Action Boards, which will be inaugurated on April 24, 2016, will be to work together in promoting better quality of life for the community they represent.

#### Community Organization

Among the processes learned and adapted with the organizational processes, there were groups here for joint tasks called mingas, which are still used, but in the training processes that have taken place in the municipality by the government and social organizations have taught that the practice of organizing into cooperatives, associations, and groups to form small companies for transforming products from the region.

The municipality has 22 Community Action Boards duly appointed and registered in the Subsecretariat of Development of the Nariño Governor's Office, with the exception of the Central Community Action Board whose latest appointment was done in 2008 and

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expired in 2012. There is no updated central CAB in that the last invitation did not allow for its election.

#### Customary practices

There are customary practices done as a group that have been maintained throughout history such as: La Cumba: (The day of the harvest) when it is abundant and good, the pawns are given a small part of the production. In the end, the owner invites the participants and friends to celebrate at his home, where a party is held including an alcoholic beverage (chicha), and food. El Enteje: In building homes, in addition to the owner, neighbors, family, and friends also participate freely, so only the "foreman" is paid. On that same day, after completing the work (the enteje), the owner offers a party to those who helped, during which the guests are given traditional food that may consist of cuy, hen, pork, home-made noodles, empanadas, chicha or aguardiente; musicians are hired for this to liven up the party.

#### Gastronomy

Gastronomy is an element that is very closely tied to the municipality's activities such as barbecued cuy, bred practically in every home in the municipality (in the kitchen), with potatoes. There are also corn tamales, mazamorra, tortillas or arepas (fried or roasted), sweet pumpkin, juanesca, champus, chara, cuchoco or arniada (corn soup), aco, arrancadas, poleada, locro, mote, sopa chorreada, chicha, panuchas, empanadas, and pavazos made with wheat flour.

#### Traditional uses of natural resources:

Since Yacuanquer is located in the foothills of the Galeras Volcano, is involved in Resolution Number 052 of 1985, which establishes the Galeras Flora and Fauna Sanctuary, and through Agreement number 013 of January 20, 1985, the Galeras Flora and Fauna Reserve is created, to preserve the animal and plant species; the approximate surface is 7615 hectares, located in the municipal jurisdictions of Pasto, La Florida, Sandona, Consaca, Yacuanquer, and Tangua. Counting the municipality with 815 hectares within the Galeras Flora and Fauna Sanctuary, with beautiful sites such as the Telpis Lagoon and the Mejia Lagoon, which not only represent the geographical beauty

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of the Municipality, but also serve as the stage to show the need to conserve the environment.

Currently, this Sanctuary area is especially protected by the Nariño Special Regional Unit of Parks of the Ministry of Environment, which in recent years has invested significant resources in building a guard shack and designating qualified personnel as forest rangers, to avoid logging, fires, and deforestation, from which the zone has suffered; now most of the community has gained awareness about the strategic importance of the region (Yacuanquer City Hall, 2016 s.f.)

Water springs and their location in the protected area of the municipality  
 The municipality of Yacuanquer is rich in water reserves because its territory is located in the foothills of the Galeras Volcano, which creates good water quality in its streams, but the destruction of its natural resources due to agricultural expansion, the use of forest products for various purposes, the frequent generalized burns of grass, stubble, and forests throughout the territory, illegal mining mostly with no means of safety or conservation of natural resources, affect the entire area of microbasins, causing serious damage to the entire ecosystem. The challenge of achieving coordinated cross-sector objectives-based management such as the most rational possible use of water resources is limited due to the gaps and deficiencies that characterize the sectorial planning basis and those of general government management.

#### Municipality of Tangua

##### General analysis:

The municipality of Tangua is located 28 km to the southwest of the capital of the department of Nariño, with an area of 239 km. Located in the Andean mountain range, with borders on the Bobo and Curiaco rivers, its fertility and colorful landscapes that are part of its draw, it is framed within an Andean and Amazon ecosystem, which currently is promoted as an "ecological paradise" with hikes to Las Cochas.

The panorama of the Tangua urban center is rectangular, with its main square and imposing church that give its architecture an indisputable cultural value. Religiosity is a strong element that unites the community in celebrating the religious festivals of San Rafael Arcangel.

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The municipality of Tangua is connected with the city of Pasto, the capital of the department, through the Panamerican Highway. This same Panamerican Highway connects with the border cities of Ipiales and Tulcan. This particular characteristic about road infrastructure and geographical location of the municipality of Tangua has allowed for access to the services offered in these cities. The municipality is connected to the city of Pasto over 25 km of the Panamerican Highway, 63 km for the city of Ipiales, 75 km for Tulcan, 60 km from the Antonio Nariño airport in the municipality of Chachagui, and 281 km from the Tumaco sea port. (Alcaldia de Tangua, 2016).

The geographical location of the municipality of Tangua is key in understanding the settlement patterns that have taken place in this municipality since its foundation, which shows that until 1864, it was a township of the municipality of Yacuanquer, when ordinance 103 of 1864, issued by the Cauca Assembly, established it as a new municipality in Colombia. This represents legitimacy in democratic terms as granted by the Colombian government unto a territory.

The municipality of Tangua, along with the Center Subregion of the department of Nariño, is mainly agricultural, its economy being based on the production of fruits and vegetables to sustain thousands of families that inhabit the area according to the vision set forth from the Governor's office for 2015, the Center Subregion is proposed as a commercial development axis for comprehensive agricultural production in Nariño, with the best connecting roads in the department, providing better quality of life to its inhabitants, with the possibility of accessing excellent education, housing, and health, preserving the environment and protecting microbasins, communities in peace and social coexistence (Gobernacion de Nariño, 2016).



Image 5.3.103 Female farmer. Municipality of Tangua  
Planar coordinates. Magna Origin Colombia  
E 964747,084 – N 612761,906  
Source (Géminis Consultores Ambientales S.A.S., 2016)

Regarding the sociocultural behavior seen in the population of the municipality of Tangua, the following data is presented as a sign of concern before the cultural panorama in terms of education given that, according to the MDP, Tangua is a municipality that is not certified in education according to law 715 of 2001, the competencies for appointing, transferring, establishing the administrative and permanent staff fall under the departmental Secretary of Education of Nariño and the municipality must manage the resources from the SGP (General Revenue-sharing System) allocated for quality and providing the information required by the Nation (Alcaldia de Tangua, 2012)

The analysis of the 2008-2011 Development Plan determined that the education programs are not in agreement with the actual needs of the municipality, that the school infrastructure is deficient, insufficient availability of teaching material, a lack of commitment by teachers with the municipality's development, a lack of space in the school cafeteria program, and a high level of attrition in middle secondary education (Alcaldia de Tangua, 2012).

This data shows a lack of educational quality for the municipality of Tangua, which clearly shows that if there is cultural wealth in certain aspects of daily life in its inhabitants, there is also a worrisome situation in the education sector, taking into



account that this is where there is recreation and the early intellectual structure is developed so that culture may persist over time with all of its traditions and cultures.

**Historical facts:**

For many years, the municipality of Tangua has been nuanced by human activity and settlements, the first inhabitants were indigenous communities belonging to the Quillasinga ethnicity; the first families recognized in the region were: the Puchanas, Timanases, Pascuazas, and Lopez; then came the surrounding subdivisions of Los Condes, Los Jojoas, Los Carlosamas, Los Mallamas, Los Amaguañas and Los Gamboas; Currently there are still some descendent indigenous groups that conserve their organization, habits, and customs.

On the foundation of the municipality there are two accounts: the indigenous and the official – the first by Francisco Puchana, in colonial times, following the need of the tribe that due to the instinct of conservation and defense, was established creating a straw hamlet. - The second is provided in the year 1840 by Juan Dorado, Laureano Guerrero, and Alvaro Guerrero. Since its foundation in 1864, it was a township of the municipality of Yacuanquer, when by ordinance 103 of 1864 issued by the Cauca Assembly, it is established as a new municipality in Colombia. On the name Tangua there are different accounts, including:

According to historical tradition, its name comes from a primitive Inca voice of Tangua, that was taken from a tribe whose chieftain was named Tangua and that due to the Guamues river, entered into this region from the east.

Its origin comes from the words Tanta Agua [Much Water], that when shortened ended up as Tangua.

It is derived from Tagua, a product from the eastern regions, referred to as plant ivory from the Amazon.

Derived from the Quechua word "Tawna", which means walking stick, a place where people would walk with a staff.

It comes from the word "Tanga", which in colonial times was a town in the colony of Pasto. (Alcaldia de Tangua, 2016).

Another important point regarding the history of this municipality, and in the interest of providing a brief description of the population's way of life, a public document is posted

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on the website of city hall, an interview with Miguel Antonio Villota on Junio 12, 2002 stating: "Up to 1930, the municipality of Tangua had remained in a static situation, due in part to the consequences from the absurd Civil War, call the War of 1000 days, and then due to the momentum of the employees of the times, that some of them lacked the vision to envision the forms of progress. For this and other reasons, falling behind became ostensible in various aspects in urban and rural settings. In the urban setting there were abandoned buildings, their plaster deteriorated over time looked unpleasant on the streets, on some there were ditches with filthy water, unkempt grass on the sidewalks, garbage dumps, and pets permanently wandering everywhere such as sheep, dogs, pigs, hens, even cattle, all of this showed indifference by the representatives of the authorities and the inhabitants themselves, the behareque houses with straw roofs were crumbling on the outskirts and even some in the urban center, the pigllo fences did not seem connected to their buildings, the people's customs in their clothing seemed unattractive, men wore ponchos, worn out cloth or straw hats, and others made of wool, fique shoes, and rustic leather sandals..." (Alcaldia de Tangua, 2016).

**Cultural symbols:**

The municipality has the House of Culture in one of the old facilities that evoke the idiosyncrasy of the municipality, from where the cultural activities for the rural and urban sectors are coordinated. Special note is made of project strengthening activities such as the San Rafaelito Band, a group that since its foundation in 2008 has achieved major artistic recognition on a national, departmental, and regional level, making Tangua proud. Former administrations have worked to make the religious festivities visible in October in honor of Saint Raphael the Archangel, a festival that draws visitors from various parts of the national territory. The work that the House of Culture has carried out in recent years has managed to recognize various artistic expressions present throughout the territory of the municipality. Managing to identify great artistic and cultural potential; however it is in mediocre condition despite being cultural heritage to the people of Tangua. The house of culture, as a public entity, is committed to training and agreement processes to reach and rescue artistic and cultural expressions in Tangua. Its purpose is to rescue and recover the cultural identity of a people and conserve its ancestral roots

Ancestral culture is part of the identity of Tangua, rich in beliefs and myths such as La Vieja, La Llorona, La Gritona. Belief in ghosts is commonplace.

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In Tangua, the Blacks and Whites Carnival is celebrated. Artists are occasionally recognized; citizens expect to promote and create venues for cultural expression; research and the promotion of culture is considered to be very important and necessary. Tangua has a Municipal Council of Culture, a House of Culture, a Public Library, Education Institutes, Music Schools, Tangua Institutions for Artists, Religious Choirs, Traditional Music Groups, a Community radio station, an Artisans Association.



Image 5.3.104 House of Culture. Municipality of Tangua  
 Planar coordinates. Magna Origin Colombia  
 E 964707,571 – N 612749,194  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.105 Andean music group. Municipality of Tangua

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Planar coordinates. Magna Origin Colombia

E 964707,571 – N 612749,194

Source: (Géminis Consultores Ambientales S.A.S., 2016)

#### Radio Station

The Impacto FM-Tangua radio station is headquartered in the urban sector, has an approximate coverage of 70% of the territory and constitutes one of the main media outlets for information and communication. The Tangua 99.7 radio station has been operating for 10 years, has the authorization of the Ministry of Communications and currently the municipal administration is seeking to strengthen its proper operation and greater coverage, because the northern zone of the municipality from the villages of El Tambor, Las Marquesas, and others cannot receive the signal. Currently, it is carrying out commercial and informative programs, among which is the program "Talento al aire", and "Hablemos claro", directed at the community in general.

#### Library

The "Gabriel Garcia Marquez" library is located in the urban sector of Tangua, which does important work for the youth and the community in general, offering consultation services, book lending, exhibits, the editing of teaching, bibliographical, audiovisual, and musical material. Currently, the library contains 3,500 books, a large number of video and audiovisual material available for lending or look-up to the entire community. On average it is visited by 70 people from the ages of 7 to 16. The education centers in the rural zone have libraries that are not modernized, so it is difficult to have access to information and research.

#### Cultural Events

Of note is the religious festival of "Saint Raphael the Archangel", celebrated in October, as well as the day of the Tangua artists, with their religious, cultural, and recreational events. The religious component is managed by the "Saint Raphael the Archangel" parish, whose mission it is to carry out community faith-based and spiritual activities on the paths of peace, forgiveness, and salvation. It must be noted that the Tangua community is religious, as seen in the turnout. The second component is cultural, promoting the activity named: "The Cultural Takeover", with various artistic manifestations from the guest municipalities from southern Nariño. These municipalities visit Tangua and offer a representative showing of dance, music, food, and others throughout the day. The House of Culture, as the responsible party,

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coordinates the departmental gathering of trios or serenades in Tangua, along with inter-municipal bands and folkloric dancers, and the theater season. The festivals at the end and beginning of the year have two original and authentic events in the municipality: the first is "El Baile de las viejas", which kicks off the Christmas festivities. In mid-December, with boys, girls, teens, youth, and adults, to perform the choreography, characterized by exaggerated costumes, and traditional and folkloric string music and dance. This is done at night and moves through every neighborhood in the urban sector of Tangua; people are delighted with the event and voluntarily give money, which determines the duration of the dance. Year-end festivals with the traditional parade of "años viejos".

#### Religious festivals

The folklore and the festivals in the municipality go hand in hand because as they are celebrated, affection, culture, and knowledge are expressed such as in the Saint Raphael the Archangel festival. Catholic followers worship Saint Raphael the Archangel, offering cultural and religious acts as homage; these festivals begin with a quincenario with participation by all neighborhoods and villages, the tradition at this event is to collect groceries for families in need, on its eve they burn castles and vaca loca. The day of the festival, after mass, there are cultural and musical acts, a marathon of wooden carts and floats with pilots and co-pilots, there are bullfights; other celebrations in the municipality celebrate farmer's day. On both occasions religious, sporting, folkloric, and cultural events converge; musically, groups, trios, and orchestras from the municipality entertain on the nights when the festivals are celebrated.



Image 5.3.106 The Church of Saint Raphael the Archangel Municipality of Tangua Planar coordinates. Magna Origin Colombia

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E 964747,084 – N 612761,906

Source: (Géminis Consultores Ambientales S.A.S., 2016)

### the Qpaq Ñan Trail in Tangua

The Qpaq Ñang trail was the inter-Andean corridor from Argentina to Nariño, creating trade networks between the ethnicities that existed at the time, where ancestors traded, exchanged cultures and knowledge, bartered agricultural products, textiles, species of flora and fauna, handicrafts, and ceremonial and household items, and as a route to the mountain of fire, they would leave offerings and prayer; it is still used by pilgrims; during the pilgrimage to the Our Lady of Las Lajas Sanctuary in Ipiales by farmers and the indigenous people of the region, another population group that uses it are mountain bikers on their journeys. Currently, the municipality of Tangua is still an important landmark for municipal, national, and international connections, with a toll for the Panamerican Highway located in the village of Tablon Obraje. In addition to the dynamics provided by transportation, given its location in the Panamerican area, a tourism municipality has been established, with its tradition of food and handicrafts made from junco reed; because of a continuous relationship with foreigners, they are excellent, hard-working hosts, keepers of traditions and customs; they practice the catholic religion. (Alcaldia de Tangua, 2012).

### Community Organization

The municipality's community is in a continuous training process on community organization matters; results of this can be seen in the family and community organizations and associations in the artisanal creation of: milk-based products, trout and guinea pig farms, junco reed handicrafts, artistic and dance groups, both in its municipal capital and in its villages, connecting all of these processes to the sector with the heaviest vehicle traffic on the Panamerican Highway between Pasto and Ipiales, specifically the Pasto-El Cebadal section. This fact, along with the construction of four service or gas stations, has favored income generation with a gasoline surcharge equal to approximately 40% of the resources of the municipality of Tangua. Also, the municipality is in the original circuit of the Circunvalar de Galeras road, that connects to 5 other municipalities in the department: Pasto, La Florida, Sandona, Consaca and Yacuanquer.

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**Farmer and traditional music**

"El Trio Sentimiento", comprised of maestros Federico Guerrero, Elmer Quintero, and Olivo Ibarra, musicians dedicated to preserving the traditional music of the region and the country. Olivo Ibarra is a member of the Colombian Society of Authors and Composers SAYCO, internationally known as a performer and composer, most of his compositions have crossed borders and have even been recorded by international artists; this group has over a decade of artistic work, which has earned them respect and admiration in the musical field.

**Arts and crafts**

In recent years, a group of women known as "Artesanas de Tangua" was formed; they transform cabuya, fique, and junco reeds into beautiful handicrafts that are exhibited at every municipal event. The quality and creativity seen in the handicrafts have gained popularity in other municipalities in the department. Also noteworthy are other artists from the blacks and whites carnival, who year after year create a series of artistic products based on ancient knowledge and artisanal techniques.

**Traditional uses of natural resources:**

For the municipality, as with the rest of the region, their agricultural practices for managing the land and their fertilizers and fungicides have required modifications due to climate change, resulting in water scarcity, an abundance of pests, and a decrease in production, creating a new culture around appropriating water resources, conserving flora and fauna; joining programs that the government and also its organizations implement to have balance in the use of resources.

**Municipality of Pasto**

**General analysis:**

To Pasto, a determining factor is the geographical location and its status as the capital of a border department and a region that is isolated from the rest of the country, which is favorable for the city. The only connection toward the center of the country is through the Panamerican Highway, the nearest capital is 6 hours away; but the large agricultural production of the region makes it a necessary road for trade and mobility with other

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regions, as it is a strategic point for trading products form other cities and municipalities in the department.




Image 5.3.107 Nariño Governor's Office. Municipality of Pasto  
Planar coordinates. Origen Magna Colombia E 977715,417 – N 626053,058  
Source: (Géminis Consultores Ambientales S.A.S., 2016)

The municipality of Pasto has a population that represents one fourth of the total population of the department of Nariño. Historically, this has been the case; variations that may arise will be associated with phenomenon such as forced displacement, cultural changes in the rural population.

The consolidation of the city begins during the latter half of the 20th century, mainly in the 80's, due to the urban growth substantial changes take place in the city and in urban growth to the northeast of the Pasto river in the 50's, with changes seen in prior decades, the growth of neighborhoods, exceeds this natural limit.

According to projections by the DANE, from 2005 to 2012 this concentration slightly increased by 0.37%, from 24.81% to 25.18%, possibly due to the aforementioned reasons. (Labor market observatory in Pasto. Universidad de Nariño. PNUD. P.8). On the urban side, 82.5% of the population is settled, the rural sector of the city is 17.5%, settled into the following townships: Catambuco, Cabrera, Buesaquillo, El Encano, El Socorro, Genoy, Gualmatan, Jamondino, jongovita, la Caldera, La Laguna San Pedro, Mapachico, Mocondino, Morasarco, Obonuco, San Fernando, Santa Barbara, and thanks to its economy based on agriculture, they supply food to the city and other

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municipalities in the department; mobility in the rural sector toward the city will always be the choice in seeking to improve the quality of life; Pasto, as the capital of the department of Nariño, has been characterized for having an agricultural tradition, with smallholding land ownership characteristics, forming part of the famous patchwork of Nariño. Incorporating its vegetable, potato, milk, fruit, and flower products into the productive process.

**Historical facts:**

The foundational history of this municipality is rich in content; proof of this is the large number of historians that have researched and narrated the events and facts to rebuild the legacy that Pasto currently represents, with its cultural wealth that is reflected in the various fields of art, food, and architecture.



Image 5.3.108 The passage Corazón de Jesus passage. Municipality of Pasto  
 Planar coordinates. Magna Origin Colombia  
 E 977639,964 – N 626125,491  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

The municipality of Pasto was created in 1927 through ordinance No. 14 issued by the Nariño Assembly, suppressing the province of Pasto. (Pasto A. d., 2016).

When looking at the first communities that inhabited the area where the city of Pasto is today, it is worth mentioning that the Quillacinga people were the first to inhabit this land.



Image 5.3.109 Nariño Square. Municipality of Pasto  
 Planar coordinates. Magna Origin Colombia  
 E 977633,393 – N 626072,857  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

The Quillacinga, in their religious beliefs, were monotheists and totemic. They worshiped the sun, the water, the frog, the serpent, the monkey, and other animals and elements. In their beliefs they included human sacrifice. Their funeral rites were special; they dug large, deep graves to bury the dead with all of their assets and food for the long journey into the beyond. Characterized for cannibalism, belligerence, and unruliness. They used weapons to defend themselves from invaders. Their fierceness stopped Pasto from being founded many times. They used sticks and stones and few poorly-made lances as weapons. They molded mud with good taste and technique; they made pots, pitchers, bowls, and whistles. Statuary in stone and mud shows a great understanding of decorative arts. Its culture belongs to a period that archeologists call the integration. Quillacinga means "half moon", "moon nose", for some and "gold in the nose" to others.

The Quillacinga settled in locations such as: Mapachico, Genoy, Jongovito, Obonuco Cabrera, Jamondino, Pejendino, La Laguna, Mocondino; the Quillacinga settlement area is characterized by its wide presence of petroglyphs and pictograms showing their high degree of spirituality. Although no actual temples for religious rites have been found.

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Due to its location on sloped yet fertile lands, they had to be clever in molding the territory for agriculture according to ancestral teachings. The Quillacinga ethnicity has allowed for defining a group of humans characterized by its territory, linguistic variety, and specific practices, with social management where interactions resulted in good living. This is the legacy that is still found today in the farming communities found in these inter-Andean valleys (Garcés, 2010).



Image 5.3.110 The Church of Santiago Apostol. Municipality of Pasto  
 Planar coordinates. Magna Origin Colombia  
 E 977103,04 – N 625667,417  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

For further context about the history of the city of Pasto, the following is worth recalling: since late 1781 Pasto demonstrated its sentiment for independence by rising against the governor of Popayan Jose Maria Peredo, later sacrificed in Catambuco. In the years 1811 and 1812, the Pasto Council signed the Solemn Acts, containing its most decided patriotic sentiments that, subsequently due to unfortunate circumstances, changed the course of these manifestations. In 1809, with lances, sticks, stones, and guadua cannons, the people of Pasto defeated the invaders from Quito at the Guaitara

pass. In August 1823, generals Salom, Florez, and Herran, before the impossibility of surrendering to Agualongo, who had sieged the city, sent three nuns as peace emissaries to persuade him into a retreat or surrender. But they, belonging to the house of God and King, advised Agualongo to do the opposite. There is no other such case in history (Pérez, 2008. Ed.226).

These events have contributed to the constitution of a population dynamic that is nuanced for being a connection point, and for the relationship with potentials in the region. Western values imposed in the 16th century and the markedly "different" stance compared with the rest of the country regarding its emancipation process, has marked the vision throughout history, to present day. A vision that is recreated from the entrepreneurial spirit of its people, with a great sense of artistic creation focused mainly on the music, a geography that is rurally fragmented and is a patchwork that forms part of the national identity.

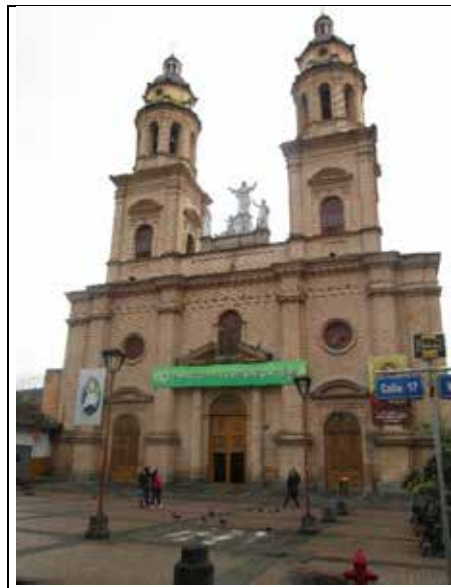


Image 5.3.111 Pasto Cathedral  
 Planar coordinates. Magna Origin Colombia  
 E 977454,216 – N 626175,264  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

Throughout its history, Pasto has not been indifferent in absorbing the migratory, domestic and international population. Families from the old continent become present in the early 20th century, the settle in and along with them their economic activities, which has an influence on the acculturation process of the city, basically with the cultural and religious beliefs and practices that this population introduces into the city; by mid-century, rural migrations contribute to Pasto's acculturation, broad sectors of the city begin to become populated by new inhabitants and this is how the ancient geographical boundary imposed by the Pasto river is surpassed by these migrations and they incorporate new habits, culture, and practices that meld with the population strictly from Pasto. In the late 20th century and early 21st, the migrant acculturation is influenced by forced displacement; this is how a cultural hybridization is constituted in modern-day Pasto. Various cultures, despite being in the same department, converge in the urban center, all motivated by the opportunities and life change, either for survival or to better opportunities offered by the city.



Image 5.3.112 Traditional Arq. balcony. Municipality of Pasto.

Planar coordinates. Magna Origin Colombia

E 977410,14 – N 626137,671

Source: (Géminis Consultores Ambientales S.A.S., 2016)

Cultural symbols:

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The city of Pasto is world famous for the Blacks and Whites Carnival, a celebration that takes place from Cauca to Putumayo, with a great display of artistic and cultural activities that take over the main squares and parks of the cities and municipalities in the three departments, especially Nariño, where the greatest artistic and artisanal demonstration is experienced in its parades, one of the most important being the grand parade, where colorful carriages go through the streets and the joy is plain to see in the faces of all who watch. This carnival can be considered as the main celebration in the entire department, as mentioned in the above municipalities, where each has its own experience, following the tradition and the guidelines for what is to be done during every day of the carnival. Everything begins with the pre-carnival, December 28: "The first day of the festivities celebrate the Carnival of Water, during which the streets and houses are sprayed to create a playful atmosphere. On December 31 the Años Viejos parade takes place, where troupes go through the streets with satirical effigies that represent current events and celebrities. This journey ends with the cremation of the Año Viejo ritual. The last two days of the carnival are the most important, when all of the participants, no matter what their ethnicity, paint their faces black on the first day, and powder them white on the second, to symbolize equality and unite all of the citizens in a common celebration of ethnic and cultural differences". (Unesco, 2016).



Image 5.3.113 Carnaval Square. Municipality of Pasto  
Planar coordinates. Magna Origin Colombia  
E 977859,178 – N 625618,818  
Source: (Géminis Consultores Ambientales S.A.S., 2016)

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This is how the Blacks and Whites carnival has become one of its major tourist attractions, included in 2009 into the Representative List of the Intangible Cultural Heritage of Humanity, today declared by UNESCO. This is a period of intense coexistence, in which homes become collective workshops for representing and transmitting carnival arts and where people of all classes come together to express their views on life (Unesco, 2016).

But it is not only an expression of the "game", of revelry, and of social and cultural exchange, the entire population participates in the Carnival; it is the participation of artisans that makes the celebration, a transcendental fact not only on a national level, but also on an international level. Due to the grand display of creativity put into the carriages, in addition to artisans there are also dancers who prepare during the entire year for the parades, where the most traditional Andean dances are displayed.



**Image 5.3.114** Manuel G. Mora Mural at the Palace of Justice. Municipality of Pasto Planar coordinates. Magna Origin Colombia  
E 977751,804 – N 625965,59  
Source: (Géminis Consultores Ambientales S.A.S., 2016)

The arts, the expression of thought, and the identity of the people of Pasto, form part of the socio-cultural views that have been historically created and shared in this city; its various manifestations credit the city of Pasto with high culture and intellect both domestically and internationally. One is the "Pasto varnish, a decorative, pre-Columbian technique that uses "Mopa", leads us by the hand toward the work of traditional handicrafts with a long history that has evolved with diverse ornamental motifs and are an example of the native Pasto skill for drawing and decorating." (Gobernacion de Nariño, 2011).

The municipality of Pasto has professional artists, both experienced and amateur, in all artistic manifestations: painters, sculptors, filmmakers, and producers in audiovisual media in multiple formats; writers in narrative, poetry and essays, oral narrators, declamators, minstrels, playwrights, theater and puppetry directors, actors, circus performers, contemporary and folkloric dancers, vocal and instrumental musicians and band leaders and composers, specialists in fostering reading, and cultural operators. Many of them form part of associations, foundations, and collectives as organizational and creative organizations. Although there are a significant number of artists with their countless creations, they operate in an economically precarious setting, with fragmented and inattentive education, a low institutional supply of specialized libraries in specialized art and bibliographic material, low possibilities of artistic exchange among peers from other cities in Colombia and abroad, and adding to these conditions, low pay for their work, exclusion of most artists and performers from the Social Security System, low likelihood of access to dignified housing and recreation, and a lack of rights that other professionals in other fields have (Alcaldia de Pasto , 2012).

#### New technologies

The adoption of new technologies in various economic fronts in the municipality of Pasto is quite incipient, including the cultural sector, due to the low presence of the industrial sector, the precarious level of economic development, and aspects that affect its lag such as the poor condition of the road infrastructure, the geographical location; since historic times this has caused lag, not just for the capital city, but for the department of Nariño in general; this is why its main road toward inland was only built in the 70's. Despite that, there are some uses of technology for industrial or semi-industrial processing that the foreign migration process of the last century brought about to the city of Pasto.

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Regarding the cultural field and the cultural industries that are applied in Pasto, they are currently being developed, understanding that cultural industry is: "the sectors whose organized activity is for producing, promoting, disseminating, and trading goods, services, and activities with cultural, artistic, or heritage-related content." (Rodriguez, 2014) Regarding the aforementioned concept and considering that for its application more media and technology must be used for its application, this municipality still does not work on a mass scale in this industry, according to the data, there is progress made by the Artefacto collective, which consists of mapping the various cultural activities that are carried out in the city, in order to have better integration and collaborative work between its operators, conversely there is Pasto Vive Digital – Gobierno en Linea, an institutional project financed by the Ministry of Information and Communications Technology, Colciencias, Pasto City Hall, as cooperators, and ParqueSoft Pasto as Executor.

That seeks to promote better communications and interaction with the citizens of Pasto, to foster the use of more and better services provided by the local administration. These examples are clear evidence that the entrepreneurial capacity is had in the city, where cultural operators from various creation fields are seeking to increasingly improve their artistic production and thus raise it to the international level, however it is clear that there is a long road ahead in the field of cultural industries in this city and in the department.

#### Religious architecture

The quintessential religious symbol that marks the religiosity of the people of Pasto, is the Virgin of Mercedes, who has been named the "patron saint of the city" throughout its history to modern times, reverence to the Virgin of Mercedes is in the form of a symbol over which citizens deposit their needs, desires, their beliefs and faith. Within the urban area, the city of Pasto recognizes each of its temples as a site of religious importance, although that with the highest importance is the temple to the "Virgin of Mercedes", of the temple of La Merced.

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Image 5.3.115 The Church of La Merced. Municipality of Pasto  
 Planar coordinates. Magna Origin Colombia  
 E 977711,281 – N 625815,985  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)



Image 5.3.116 U. de Nariño. Legal Offices. Municipality of Pasto  
 Planar coordinates. Magna Origin Colombia  
 E 977805,551 – N 625857,222  
 Source: (Géminis Consultores Ambientales S.A.S., 2016)

### Cultural organizations

Pasto has a good level of cultural offerings and has been the birthplace of painters, composers, musicians, sculptors, actors, artisans, artists, and intellectuals renown nationally and internationally.

The city has Regional Artist Halls, Drawing and Painting Schools, Artistic and Musical Education Schools, Dance Schools, Theater Schools; there are also processes for professional education in music and art in the academic program of Universidad de Nariño. In many education institutions there are musical education programs, education in the arts, theater, music, photography, cinema, literature; there are artisan workshops and schools, formal and non-formal independent workshops (Gobernacion de Nariño, 2011).

In parallel with institutional work, the private sector is delving into other culture spheres and thus we have Exhibitions for Paintings, Photography, Sculpture, the International Theater Festival, the Cinema Festival, the Farmer Music Festival, the Dance Festival, the Bolero Festival, the Pasto Stories and Food Sampling Festival; these events are held periodically during the year, created and organized by various groups and collectives that independently contribute to the city's cultural development.



Image 5.3.117 Imperial Theater. Municipality of Pasto  
Planar coordinates. Magna Origin Colombia  
E 962885,599 – N 613996,584  
Source: (Géminis Consultores Ambientales S.A.S., 2016)

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Although the Secretary of Culture has sources of finance from the General Revenue-sharing System SGP, cultural common purpose, collections through the Pro-culture Stamp, its own resources, from a percentage of financial returns, its budget is insufficient for financing all of the cultural activity the municipality requires, especially for disseminating artistic productions, particularly for local artists.

#### Education offering

The municipality's education offering does not have a broad portfolio of education academies, schools, and colleges for art and literature. It must be noted that technical education institutions and universities contribute with training programs associated with the arts, design, and human sciences. Likewise, the Municipal Secretary of Education has a musical education program that welcomes children and teens from various municipal education institutions. For the remaining expressions such as theater, cinema, dance, oral narration and ballet, the offering for artistic education is insufficient in non-formal programs. Approaching knowledge about the arts is imparted within the theater, dance, and oral narration groups that are invested in developing these artistic expressions. Lastly, the education workshops for the carnival, plastic arts, and dance, whose purpose it is to take advantage of free time and participation in the Blacks and Whites Carnival, are worth mentioning.

#### Gastronomy

Regarding economic traditions, a cultural symbol would be food, represented by cuy, the quintessential traditional dish, which is renown nationally. It is economic in nature, as it has sustained the self-consumption of families and has promoted the creation of the food industry, which generates employment and its production does not require major investments.

#### Traditional uses of natural resources:

Pasto has a unique landscape, comprised of the La Cocha Lagoon, the Galeras Volcano, with a height of 4,276 mts. and its namesake Flora and Fauna Sanctuary, the Chimayoy Environmental Center, Interpretative Trails, the Qhapaq Ñan, the Curiquianga Center, the La Coba Negra Lagoon, and the Rio Bobo dam.

#### New pact for nature

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### Municipal environmental management

The environmental structure includes: "the determining and conditioning factors unique to the land due to its natural condition and other indispensable elements to ensure the supply of environmental resources needed for the survival of the population and the rendering of ecosystem services. The main component of this structure is Municipal Ecology which, established on its hydrographic resources, constitutes the foundation of its land zoning." (Alcaldia de Pasto , 2012).

### Minor Land Units

#### Intangible Cultural Heritage

Regarding the minor land units of the municipality of Imues, the following approximation is done regarding intangible cultural heritage in its villages, with regard to the social practices seen in the Pedregal village based on field observations it can be said that this village is highly important gastronomically for travelers on the road, as it is a population center, a mandatory route and rest stop when traveling to Ipiales toward Ecuador, or to Tuquerres and Tumaco. It is plain to see how traditionally its inhabitants have taken advantage of its geographical location to make it a site with varied foods that are unique to the region, where travelers can find various locations for breakfast, lunch, dinner, or having some coffee while passing through, as well as enjoying the famous cheese arepas, frito pastuso, and tostado.

For minor land units, the villages of Inantas Alto and Inantas Bajo, in the municipality of Yacuanquer, it can be said that one of the most important social practices in the community is agriculture; harvesting the land is of vital importance to financially maintain the traditional families that inhabit these communities, conversely the way in which families have traditionally harvested the land are millennial practices that have not been lost over the years, and the inclusion of technology in the seeding and harvesting of the land.

Regarding the villages in the municipality of Yacuanquer: Inantas Bajo and Inantas Alto, its famer population still preserves some practices and conditions, among them the practice of traditional medicine through healers, sobanderos, midwives, rezanderos, that inhabit the village. This shows the conservation in a system of beliefs and modes of

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knowledge perpetuated in the heart of the community that also provides value to the cultural identity of these villages that are so important to the municipality.

For the villages in the municipality of Tangua, an approximation is made to see the intangible cultural heritage that is found in the villages that comprise this municipality.

In the village of El Cebadal, the most important social practice seen relates to the catholic faith, in the village there is a beautiful capital in which all of the ceremonies of the catholic faith are celebrated, showing a deep-rooted identity in the celebration of the religious festivals of the Our Lady of Mount Carmel, which is celebrated on July 16, together with the festival of Corpus Christi in June. To the community of this village, the chapel has become a pilgrimage site. Conversely, its customs include the practice of traditional medicine.

This village also shows the following information mapped by the LMCC Archeological group: SITE 69. Piartal/Tuza. Located in the village of Cebadal, municipality of Tangua with coordinates N: 615515 E: 966805 between PR: 21+000 - 20+700, whose geoform is hill, where a corn and potato field is found. Prospecting was done on this site in furrows in an area of 3909 m<sup>2</sup> and a stratigraphic profile was done where abundant ceramic and lytic material was recovered between 125 and 141 cm. in depth.

The reported density of the cultural material for this site is 1512 grams of ceramic material mainly associated with the complex Piartal/Tuza with fragments of pots, bowls, and cups mostly with no decoration. The lytic material reported was 194 grams; a hand grinder was reported, the rest were chips and irregular fragments from carving basalt, andesite, and quartz. On the other hand, historical materials were not representative, only a weight of 60 grams of glazed ceramics and earthenware were obtained.

SITE 86. Tuza. Located in the municipality of Tangua, Cebadal village, between PR 19+100 - 19+300, right margin of the road from Rumichaca to Pasto, coordinates N: 00614399 - E: 00965559. The site is a geomorphological unit identified as a terrace with a slope, adjacent to the Panamerican Highway and a tertiary road, with an approximate area of 3102 m<sup>2</sup>, with soil for crops. The site extends northeast where there is an anthropic intervention in the area due to modern occupancy, as well as a small floodable area.

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The cultural material is 1428 grams of ceramic associated with the Tuza complex and 242 grams of lytic between them an andesite core, a scraper, a basalt chip, and carving residue. According to the ethnographic data provided by the inhabitants, there are archeological extraction materials (ceramic, lytic, goldsmithing) from looting activities practiced over 50 years ago in this region, especially in the El Cebadal village where the roads path intervenes. (For more information, see annex 5.3.6c. Preventive Archeology Program)

For the Tablon Obraje village, the observable social practices, based on the information gathered through village files, are rooted in traditional medicine, as well as land ownership, where most landowners have low resources they cultivate their land with rudimentary crop techniques and family manual labor.

El Vergel is a village that was a settlement of the Quillasinga ethnicity, Lorenzo Puchana was the village founder, which previously was a meadow; currently the village has 200 disperse traditional farming inhabitants.

As part of the belief system and modes of knowledge perpetuated in the heart of the community, it is seen that within the cultural farming tradition there practice of traditional medicine persists; conversely, there is evidence of archeological findings on the property of Edmundo de la Cruz, in the year 1989.

In the San Pedro Obraje village, there are still some traditions such as the practice of traditional medicinal; reminding them of their origins is the archeological finding on the property of Monica Lopez, in 1986 some "infidels" were found, which are still preserved at the farmhouse; it must be noted that a natural reserve called Ojo de agua la Pangora is found in the village, owned by Pablo Guerrero; throughout its history an associative relationship has been established with the municipal capital of Tangua, due to its proximity, commercial relationships, and its administratively political belonging.

In the El Paramo village, the traditional practices are a mix of the farming and indigenous cultures that still conserve practices such as the use of traditional medicine represented through the current use of midwives, sobanderos, and rezanderos.

In Marqueza Bajo there are some social practices that were inherited from their ancestors, among them the practice of traditional medicine through the use of rezanderos and sobanderos in the village; there are also archeological findings on the property of Don Ruano in 1978; religious festivals are full of artistic, wealth, and joy around the catholic faith.

Just as with the above villages, the municipality of Tangua, in the La Buena Esperanza village, with a farming tradition around agriculture, practices inherited over time are also preserved regarding traditional medicine, using sobanderos and rezanderos in the village; recalling their ancestors, there is evidence in archeological findings, of the existence of tombs containing infidel throughout the sector, one in 1980, which were sold.

Regarding the report submitted by Arqueologia, the following is seen: SITE 105. Tuza. Located in the villages of Buena Esperanza, municipality of Tangua, in coordinates N: 614326, E: 965505, PR: 19+000 to 18+900, left margin of the current Rumichaca-Pasto road. Its geomorphology is a plateau with minor slopes and the prospected area was approximately 5000 m2.

The recovered cultural material is 420 grams of ceramic material associated with the Tuza and 8 grams of lytic material in basalt (one blade and one chip). According to the criteria established for weighing the archeological potential against the identified material, the site showed rescue characteristics from the intensive prospection and stratigraphic cuts.

In the village of Chavez, there is a farming and indigenous population belonging to the Quillacinga ethnicity; the council is in the process of being incorporated with the Ministry of Interior; its lands are mostly under deed and a few others rented.

In the village of Los Ajos, there is intangible cultural heritage rooted in the Qhapaq Ñan, people say that when passing on this horseshoe road, the mule trains and farm workers that herded cattle would loudly yell "arre carajo" and the echo heard from afar was los ajos, hence the name; its land is mostly private property and a few are rented.

Below is a description of the intangible cultural heritage for minor land units belonging to the municipality of Pasto:

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In the village of La Merced, their families are traditionally farmers and catholic and have religious festivals with a great display of folklore, dance, music, and food, where social practices revolve around their faith in their patron saint the Virgin of las Mercedes, celebrating their festival in September, and they also celebrate the Divino Niño festival in December. It is seen that people arrive at the village during the religious festivals and to work in agriculture all year, especially during the harvest; the main crop is potato.

As in the village of La Merced, in San Jose de Catambuco the religious festivals are equally important to this population at year end in December; it is also seen that people arrive at the village to visit during year end and during Holy Week for vacation to visit the family, and another group of people arrives to buy parcels; with roads that connect to the rest of the municipality through a primary road and one secondary road.

The village of Huertecillas honors its name with the variety of agricultural products it produces during the year. From the moment in which the first families settle in these fertile lands, they begin to grow a wide variety of agricultural products including vegetables and tubers, becoming a village with great pantry potential for the municipality, as with most of the Nariño territory, this technique in their large estates makes the region's landscape beautiful, giving it the name Huertecillas. Founded in 1991, with a disperse population comprised of 150 inhabitants, in the village there are wetlands between the Fatima village and Huertecillas that have an important spiritual tradition for the community.

In Gualmatan Alto the social practices revolve around their agricultural traditions, as their system of belief and knowledge, perpetuated in the roots of the community is the practice of traditional medicine, an example being the sobanderos that are still found in the village; as with the archeological findings, painted stones with petroglyphs on one private property, clearly indicating the identity of early settlers, in the beginning it was an indigenous settlement, that received the land for having served the council.

In Catambuco, traditional culture does not deviate much from what is described for early villages, where their belief system is mainly religious and catholic, every year they celebrate the religious festivals with a grand display of creativity visible through the folklore, music, dance, and food in the festivals for their patron saints such as Our Lady of Lourdes, which is celebrated on February 23 and Holy Week celebrated between

March and April, gatherings where faith is most fervently observed; their inhabitants continuously have processions to the grotto of Our Lady of Lourdes.

The belief system and modes of knowledge perpetuated in the community show that the village of Catambuco has a farming tradition and there are inhabitants belonging to the Quillasinga ethnicity, with all of its body of knowledge and indigenous practices, as a belief system traditional medicine is practiced as inherited from their elders that through sobanderos and taitas, they practice daily cultural practices that show their existing intangible cultural heritage in the region. According to the data provided in the village data sheet used for this project, there is data on archeological findings in the village, according to the report by LMCC Arqueologia, in the village of Catambuco one can see:

SITE 8. Piartal/Tuza. This site is located in the municipality of Pasto, in the village of Catambuco, PR 32+700 left margin, geographically under coordinates N: 620020 E: 975542; its geomorphology allows for determining a terrace with medium slope, with an altitude of 2860 a.s.l. creating an area of approximately 5390 m2 the prospecting for this site was oriented by a systematic sampling following the intervention methodology every 20m. and in the lower area by directed prospecting considering the geform, generating a full sample of thirty probe pits, 22 positives, and 8 negative probes.

On the other hand, it was seen that the site had suffered constant anthropic transformations, as evidenced by the presence of small fragments of bricks in the topsoil as a consequence of the permanent plowing of the area for agriculture, currently the land is being used for cattle.

The ceramic material for this site had a density in weight of 536 grams, and showed characteristics in the late period similar to the Piartal-Tuza ceramic complex; the forms reported by the various studies for this complex show bowls with a ring base decorated almost always on the inside, ocarinas, amphoras or jars, and also included non-decorated ceramics with rough surfaces; these materials are associated with those recovered in Site 8. The domestic forms that were identified were pots and bowls, in general with no decoration and black, brown, and red engobe finishes, unique to the aforementioned complexes, few fragments showed red paint and incisive decoration.

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Lastly, the material associated with the site and the geomorphology of the location allows for inferring that it is a Piartal/Tuza settlement related to the ethnic people of Pasto.

In the village of Cubijan Bajo, there were also archeological findings that were seen in the report submitted by LMCC Arqueologia: SITE 37 Located in the village of Cubijan Bajo, municipality of Pasto, department of Nariño, Coordinates N: 618170 E: 972688 with an altitude of 3068 m.a.s.l. The site is located at PR 29+000 left margin. Its geoform is a slightly inclined plane that in turn originates from a terraced hill, with an approximate area of 3500 m2.

The features and alterations in the strata suggests pre-Hispanic burials, the site is pondered as one with medium archeological potential which must undergo directed monitoring especially over the minimum units for intervention –UMI, where possible features were identified.

Personal property declared as cultural interest:

In minor land units in the project's area of influence in the municipalities of Imues, Yacuanquer, Tangua, Pasto, according to the reviewed information, the only property that was declared as intangible heritage of cultural interest is QHAPAQ ÑAN, Andean road system, on which a special section is made at the beginning of this component and the necessary annexes are submitted to complement the information described.

Regarding the report submitted by LMCC Arqueologia, this team has made a significant finding on the QHAPAQ ÑAN:

SITE 119. Site of Inca influence, Qhapaq Ñan. Located in the municipality of Tangua, in coordinates N: 613048 – E: 966093 between PR: 15+600 - 15+300. The geomorphology is hills with steep slopes with terraces at the top, signs of plowing was observed in them (Image 21).

Considering the geoform of the site, three methodologies were executed in order to effectively cover the prospecting for the location, carried out as follows: (1) Guided prospecting (in zig-zag) over the hillside, (2) surface gathering on the terrace, and (3) systematic prospecting with probe pits every 20m over the terrace. In total 24

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minimum intervention units were made of which 4 showed cultural material. In UMI 892, a 20cm ax was recovered in the transition from the dark brown stratum and the light brown stratum.

The site's stratigraphy shows a stratum 30cm in thickness, light brown in color, sandy texture, culturally sterile; followed by a brown stratum 63cm in thickness, sandy-loam texture with associated cultural material, and lastly a light brown stratum, a compact clay-loam texture with the presence of rocks and sediment, culturally sterile.

The cultural material for this site is 552 grams of ceramic associated with the Tuza complex and 2200 grams of lytic, including a hoe fragment, a metate fragment, and andesite rock carving waste; one complete ax and one basalt chip.

This type of Inca influence is associated with elements of the archeological landscape, among them stone containment walls, conditioned terraces, branches of the Inca trail or Qhapaq Ñan, in addition to a farm with a strategic view, for military control of the area. Therefore, it is considered to be of high archeological potential and is included in the Special Archeological Management Plan that favors conserving and protecting these structures. The vestiges of the Qhapaq Ñan are recognized due to their cultural heritage significance, in Colombia studies have begun on various segments that are still preserved in the Nariño highlands that connected to other Inca settlement sites in the Quito regions.

Sites of religious and spiritual importance:

According to the site of religious and spiritual importance in minor land units that are presented below, it is important to keep in mind that in some, the site of religious importance presented is equal to naming the religious festival that is practiced in the village, due to the lack of information had for a complete and detailed description, however the description made does not deviate from the proposed objective in the study and answers the question regarding the sites of religious and spiritual importance, as long as we understand the festival being celebrated in the village as the main location of religious importance to the community, and taking into account that the village fulfills this role during the days of the celebration.

In the village of Pedregal in the municipality of Imues, its population mostly belongs to the catholic religion, the religious festivities do not go unnoticed and therefore they

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represent the religious and cultural harmony, they flourish with all of their splendor through dance, music, and food, causing a grand display of joy. The religious festivals of Jesus del Gran Poder celebrated in May 18 and 21, and the San Pedro Apostol festival celebrated on June 18 and 20; the tradition is to have a pilgrimage to the Pedregal cross; throughout its history the village has established a relationship with the municipal capital of Funes due to commercial relations and a religious bond with the Pedro Apostol festivities.

In the village of Inantas Alto in the municipality of Yacuanquer, in the village data sheets that were mapped in the field that the catholic population congregates in a small grotto located at the village school, where they pay homage to Our Lady of Mount Carmel, with festivities celebrated in July 16 and 17, where the community holds galas showing their skills and knowledge regarding art, dance, music, and food.

In Inantas Bajo they pay homage to Maria Auxiliadora on May 20 to 25, a festival that represents the catholic tradition of the community and is fervently experienced by its inhabitants along with the festival of Saint Sebastian from January 25 to February 3, of equal religious importance.

These festivals are a symbol of pilgrimage, recreation, and leisure for all of the communities of Nariño and both visitors and inhabitants enjoy the tradition experienced during the festivities.

Below is an approximation of the sites of religious interest and the spaces for recreation and leisure for the inhabitants of the villages in the municipality of Tangua:

Over time, the inhabitants of the Cebadal village have developed a bond with the municipal capital of Yacuanquer due to its proximity and product availability; the sites of ceremonial importance include the archeological findings of infidels in the Panamerican sector in 1960, that were taken to the Taminango Museum House.

In Tablon Obraje, the religious importance lies in that the majority of its inhabitants make religious festivals an important event for the village, with a display of artists, food, handicrafts, and traditions that contribute to its culture's wealth; these include the festival of the Immaculate in May and the Baby Jesus Novena in December.

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The village of El Vergel has a temperate, pleasant climate ideal for tourism; the beauty of the Bobo river forms part of the natural inventory of the village and is an ideal setting for recreation and leisure for the inhabitants of this area.

In Concha Verde, the customary catholic tradition is to celebrate the festival from September 7 to 15 in honor of the patron saint Our Lady of Las Lajas, with a grand display of art, music, food, and faith, this community also preserves the practice of traditional medicine. Conversely, the village connects with the rest of the municipality through a secondary road; its modes of knowledge is reflected in the archeological finding of infidels in the El Tuno sector in the year 2000, which were sold to Pasto.

In the village of San Pedro Obraje homage is paid to Saint Peter, a festival celebrated in the month of June and Saint Sebastian in August, with a grand display of cultural activities where people from the area and other municipalities in the region participate, in the village there is also a pilgrimage to the Chapel, a site of religious importance par excellence.

The village of Marqueza Alto has an important site of spiritual pilgrimage, the black lagoon, an ideal place for ceremonies for spiritual healing and offerings, especially used by the taitas of the area; currently this lagoon is closed to the public and pertinent studies are done for its protection and conservation.

In the village of La Palizada, its village data sheets describe a representative site where the community has pilgrimages: el Cuzco, visited during holy week by hundreds of people that even come from the neighboring country of Ecuador.

In the village of Chavez, its inhabitants have pilgrimages to the village of San Antonio de Padua, a place where traditions and religious practices are shared. In Chavez there is a site of religious beauty, the village chapel, a place for religious encounters. The village data sheet also describes the vestiges of the ancestors that settled in these lands as found in the archeology in 1970 in the form of pots on private land; this finding was subsequently sold.

To conclude with the villages that belong to the municipality of Tangua, the village of Marqueza Bajo is described; there, its inhabitants are catholic and the foundation of their religious practices includes celebrating religious festivities such as: the festival of the Sacred Heart of Jesus on June 21, the festival of Our Lady of Mount Carmel on July 16, and the festival of Baby Jesus on Dec. 24-25. During these festivities, the community

celebrates by showing their great skill in music, dance, food, and other traditions to pay homage to their saints.

For the land units in the municipality of Pasto, the most important sites of religious importance, as described in the above municipal villages, belong to the main church, a place of pilgrimage and visits during the days when the liturgy of mass is offered, as well as the festivities for the saints in the area, the inhabitants are mostly catholic farmers and they celebrate their religious festivities with a grand display of folklore, dance, music and food.

Likewise, one important pilgrimage site is the Galeras volcano, also called the sleeping lion, the Urcunina mountain, and many other names rooted in the idiosyncrasy of the community that have baptized this mystic place according to myths and legends, where mainly the taitas of the area hold spiritual ceremonies and offerings that seek to heal the land and its communities.

**Cultural modification:**

Regarding cultural modifications, for Pedregal the population shows a capacity to adapt to change and assimilate exogenous cultural values that have caused cultural changes, this capacity to adapt can be seen based on the following fact: the majority of its inhabitants from different locations in the region have transformed the village into a tourism product offering country homes, cabins, accommodations and varied foods, an obligated route for buying fruit from the region and brought from other regions, which in a way shows that the population in these villages has incorporated symbolic and cultural values that other inhabitants have brought from their territories.

The information reviewed in the field through village data sheets shows that in the minor land units belonging to the municipalities of Yacuanquer, Tangua, and Pasto, there are no cultural modifications of major importance, as they are stable communities in cultural and political terms, with a social structure that is defined by traditions and customs rooted in the farming culture and some with the indigenous population, where the most representative social practices are religious, founded on religious beliefs. These villages connect with the municipal capitals through one, or in some cases two tertiary roads, which has maintained the economic and administrative bond needed to

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maintain the exchange of their products and the continuous movement of the population.

Foundations of the socio-cultural system:

Regarding the villages belonging to the municipality of Imues, it can be seen that the socio-cultural characteristics in this territory is based on the fact that its inhabitants have come from various places throughout the country, creating a mix as far as cultural traditions and practices that are seen in the territory, however there is not much information on them; it is also worth noting that the Pedregal village has a customs police precinct, which is a mandatory stop for inspecting merchandise being transported into the neighboring country of Ecuador.

For the minor land units of the municipality of Yacuanquer, the socio-cultural system is rooted in the traditions inherited from their ancestors conserving the practice of traditional medicine; there are also historical and cultural recognition sites in the village such as: Las Turpas, The Calvario lookout, the Maco tunnel, the Devil's Bridge, with beautiful landscapes in the mountain of: El Perro and El Gallo; the village is connected by two tertiary roads that connect to the rest of the municipality, with temporary visitors to the village for the year-end festivities, holy week, and vacation, a commercial bond has been developed with the municipal capital of Yacuanquer because of its administrative and political ties, along with its proximity, with a distance of 12 km, 50 minutes.

In the village of El Tambor, its inhabitants are traditionally a farming and indigenous community that are in the process of organizing to become recognized by the Ministry of Interior; in the village there is evidence of archeological findings, a stone in the form of an ax in Angostura in 2010, there is also a natural reserve on private property called San Francisco.

The socio-cultural system in the village of Los Ajos is a developed, connected relationship with the municipal capital of the municipality of Tangua, Yacuanquer, and Pasto due to proximity and civil relations. It is worth noting that the village belongs to the Galeras Flora and Fauna Sanctuary natural reserve, which has created a rooted thought structure on conservation and care for the environment.

Use and management of the environment:

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Regarding the use and management of the environment for minor land units in the municipality of Imues, based on the village data sheets, the knowledge perpetuated on agro, they have managed to preserve son ancestral traditions such as the practice of traditional medicine through its sobanderos and midwives that live in the region.

Equally important is the recreational aspect in this area of the municipality, as it can be used for leisure vacation, transformed into a tourist spot as it is already known in the region. A visitor that arrives at the village from other cities, departments, and even the neighboring country of Ecuador for relaxation and health; the village is connected with the rest of the municipality through a primary road, a secondary road, and a seldom-used path that forms part of the perpetuated knowledge. The relationship that the village has developed with the municipal capital of Imues has been enhanced with commercial relationship and is the administrative political component.

In the Inantas Bajo village, the use and management of the environment alludes to history: this village was founded in 1890 and history tells that ever since the war of one thousand days, there was one owner of the Inantas Ranch, General Jose M. Guerrero, also owner of the Capuli, Tapialquer, and Zaragoza ranches, that Olviedo Guerrero Troya, the General's grandson, inherited. The people that live and work in the village today have been there since 1920, they were food crop workers, in 1978 the population began to grow, this is how currently there is a disperse population of approximately 400 inhabitants.

At the village of Cebadal in the municipality of Tangua, the use and management of the environment can be seen in that its inhabitants have a farming tradition and previously lived off barley and wheat crops, its population is disperse and as far as land ownership, the majority are owners and a few have deeds; owners of a landscape of natural beauty and an excellent location, the village is often visited, and its inhabitants have the special characteristic of being friendly and excellent hosts.

For the village of El Paramo in the municipality of Tangua, the perpetuated knowledge can be seen in the following facts: the village is in the township of Buenos Aires; it was founded in the year 1952, the population center was created over 70 years ago, history tells that it was a ranch and 65 years ago lots began being sold, or exchanged for work with the people who worked at the ranch for Doctor Guillermo, who was the owner, the first families were: Miguel Lagos Jose Navarrete. Its inhabitants were comprised of

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farmers and indigenous people belonging to the Quillacinga ethnicity, with a population of 700 people in a population center.

At the Marqueza Alto village, the history is very similar; the village is in the township of Nuevo Horizonte; it was founded in 1974, it was given the name Marqueza because that was the name of the ranch where it was formed, initially the land is sold to Rafael Riascos, Juvenal Timana, Jesus Calderon, and Manuel Santacruz, who were the first inhabitants; today it is a disperse population comprised of 260 inhabitants with a farming tradition and who work in agriculture.

For the villages belonging to the municipality of Pasto, the use and management of the environment can be described as follows based on the information gathered from the village data sheets:

In this territory, the main natural resource is the earth and the water, from its care and conservation thousands of people that inhabit these lands live, the city of Pasto and its surrounding villages are an agricultural pantry to the city, therefore the families that inhabit the foothills of the Galeras volcano are traditionally farmers with strong indigenous roots in some communities, especially in the township of Catambuco, where the Montaña de Fuego indigenous reserve is found, therefore this population has had an ancestral and cultural use of its land for years, characterized for being located in the "Leon dormido", the Galeras volcano, which holds a large number of myths and legends that fill the cultural mindset with symbolism from the communities located on its foothills.

### 5.3.5.2 Ethnic communities

Functional Unit 5  
Municipality of Pasto

Regarding the identification of ethnic communities, it was elevated to the Ministry of Interior, in compliance with article 76 of Law 99 of 1993, as well as with what is set forth in Law 21 of 1991, Law 70 of 1993, and Decree 1320 of 1998, which in regard to said request, certified the existence of ethnic communities in a process of recognition (Montaña de Fuego Indigenous Council and the Catambuco Indigenous Council) by virtue of Resolution 22 and 23 of 2016 Ministry of Interior. See annexes: 5.3.5c.

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The aforementioned councils form part of the Quillacingas ethnicity, which is of great importance to the history of the department of Nariño, as this indigenous community is currently found in some townships and villages, it was the precursor to the discovery and population in a major part of the department, as mentioned in the historical events of certain municipalities; below is an outline of the Quillacinga people, based on the historical reconstruction published in the B. Luis Angel Arango virtual library. (Garcés, 2010).

The communities identified as of the first half of this century were identified with the ethnonym of Quillacinga, today occupy the central and northeastern zone of the Andes of the department of Nariño, in the current municipalities of Pasto, Sandona, La Florida, Tangua, and La Cruz.

The ethnographic text outlined herein is for the communities settled in the municipality of Pasto, a sociographic space that was chosen considering that it contains the most population that has been catalogued as belonging to this ethnicity.

In the current municipality of Pasto, there are small populations that up to the first half of this century, approximately, created indigenous reservations belonging to the Quillacinga ethnicity and today form part of the political and administrative organization of the municipality. These communities are found in the current townships of Catambuco, Chachagui, Genoy, La Laguna, and Obonuco, in the villages of Botanilla, Gualmatan, Jongovito, in the township of Catambuco, and in the settlements of the suburban area of the city of Pasto, comprising a picturesque landscape of small towns that surround it such as Buesaquillo, Chanchala, Jamondino, Mocondino, Anganoy, Pandiaco, Penjendino, Puerres, and Tescual.

Ethnohistorians believe that the time in which contact was established between the Spanish that came from Quito and the people that inhabited the Andes in what is now Nariño, the east-center and northeastern territory of the current department, it was populated by the ethnic group called "Quillacinga", a name that according to Kathleen Romoli (1963: 264) "quoted by (Garcés, 2010)", lacks ethnological precision. Garcilaso de la Vega Inca (1539-1616), says that "Quillacinga" was a nickname given by the Incas to an "Abyecta" people, that they found in the northern Ecuadorian highlands. The term according to Garcilaso, was comprised of the Quechua words, "Quilla" (iron) and

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"Cenca" (nose), given that the Incas did not know about steel until the time of contact with the Spanish, Gonzalez Suarez and Bouchat consider that the most suitable etymology is "Quilla" (moon) and "Cenca" (nose), that is, "those who wore nose rings in the shape of a moon or half moon". (Jaramillo Duque. 1982: 570) "quoted by (Garcés, 2010)".

Authors such as Romoli 1962 and E. Diaz del Castillo 1987, based on the chronicles of Garcilaso de la Vega Inca, state that in the Chota region, a province of Imbabura, Ecuador, there were indigenous people named the Quillacingas, neighboring the Pasto people, and they in turn, to the north and east with the province of Hatunllata, as mentioned in the first tome of the Quito Council, where it is said that Sebastian de Belalcazar departs to found La Villaviciosa in the province of Hatunllata. (Otero D'Costa 1535:159) "quoted by (Garcés, 2010)". Although Villaviciosa, the name with which the current city of Pasto was known in the 16th century, was founded initially in Yacuanquer and then in the Valley of Atris, these two places belong to the territory that has been defined as Quillacingas and that in the first tome of the Quito Council is called the province of Hatunllata. Apparently, in order to hide his excesses in his rush to conquer the remaining lands to the north of the Peru Governorship, Sebastian de Belalcazar named the people of Chota in Ecuador, as well as the Pasto and Hatunllata people as Quillacingas, pluralizing this toponym and moving the border of his conquests to the north of Quito; it then speaks of the "Quillacinga provinces". Hatunllata, may be the most suitable name for the peoples that in Colombia are known as Quillacingas. (Hooykaas 1991: 25-26) "quoted by (Garcés, 2010)".

#### Prior Consultation Process with Certified Indigenous Communities

Under the Rumichaca – Pasto road project given under concession to the Vial Union del Sur concessionaire by the National Infrastructure Agency – ANI, by virtue of a concession contract under APP No. 15 of September 11, 2015, whose signing of the record of initiation was carried out on October 27, 2015. Subsequent to the adjudication and signature of the record of initiation, the Vial Union del Sur concessionaire, in following the legal and regulatory provision, processed the request for the presence of ethnic communities before the Directorate of Prior Consultation of the Ministry of Interior and the request from legally incorporated territories to ethnic communities before the now defunct Colombian Institute of Rural Development – INCODER; where the Directorate of Prior Consultation of the Ministry of Interior certified through

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administrative acts, the presence of Montaña de Fuego Indigenous Councils, located in the municipality of Tangua; and the Catambuco indigenous council, located in the municipality of Pasto, both of the Quillasinga ethnicity.

#### Methodological Framework for Prior Consultation with Certified Indigenous Communities

The methodology employed in the following document has participative processes as a central element with the indigenous communities for functional units 4 and 5 of the Rumichaca – Pasto double lane road project. Since it is a Prior Consultation process, required by the standard or under the framework of enforceability, the right of indigenous people, consigned in ILO agreement 169 ratified and regulated by Law 21 of 1991 by the Colombian government, the methodological process has recognition of unique socio-cultural and economic properties as its central axis for the inhabitants of the territory or direct or indirect area of influence derived from the works to be done for the projects execution.

First moment: methodological process, based on the recognition of the existence of the ethnic population settled in the area of interest by the Ministry of Interior, the processing and issuance of certifications that validate their territories as reserves and councils.

Second moment: based on the creation of professional Prior Consultation teams, who begin to create the methodological routes together with the communities to recognize the indigenous territory that will be affected by the construction of the double lane road, with the following steps: Pre-consultation, the opening and installment of the Prior Consultation process; a biotic and social/ownership identification, the presentation of the biotic, abiotic, and social/ownership component of the environmental impact study EIA, for functional units 4 and 5.1; Rumichaca – Pasto double lane road project; social mapping workshop, impact assessment pre-workshop; management measures and impact identification workshop.

The tools employed for mapping the information were the following:

Outreach meetings with the authorities, their workgroups in certain spaces previously determined with the communities. In the case of identification tours participative transects were made consisting of tours of the project's area of influence to identify the

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territorial demarcation, the possible effects and impacts to the territory on biophysical and sociocultural aspects. In social cartography, the most relevant aspects of the environmental, territorial, cultural, and productive themes were spatially located. In the workshop for identifying impacts and management measures, a set of variables were agreed upon with the Prior Consultation team to collaboratively create a qualitative impact matrix, from the worldview of the people, the life experiences, and knowledge of the territory by the various members of the community.

The entire Prior Consultation process and its various phases, has been framed within what is known as participative observation, to provide feedback into the project with little-known and unknown aspects of community daily life. This is to ensure inclusive work, that consolidates the basic principles of respect through transparency, good faith, and the strengthening of trust to obtain ideas for performing due process.

#### Certification chronology

With the project designs for the Rumichaca – Pasto road delineation, the Vial Union del Sur concessionaire, requested on January 4, 2016 the certification of the presence of ethnic communities for the "4G Concession Project Rumichaca – Pasto under APP outline No. 15 of September 11, 2015. Functional Unit 4 and Functional Unit 5.1 Sub-section 1".

The Directorate of Prior Consultation of the Ministry of Interior by virtue of administrative act Resolution No. 110 of February 22, 2016 and Resolution No. 111 of February 22, 2016 issues certifications for each functional unit certifying that there is no presence of ethnic communities.

Vial Union el Sur concessionaire, by virtue of request EXTMI16-0019006 of April 25, 2016, makes it known to the Directorate for Prior Consultation of the Ministry of Interior that after Administrative Act No. 110 and 111 of February 22, 2016, informing that "indigenous communities have been seen in the zone by the Montaña de Fuego and Catambuco sectors, municipalities of Tangua and Pasto... communities belonging to the Quillasinga people."

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Prior Consultation Office conducts a verification visit between June 9 and 11 2016 so as to check and establish whether there are indigenous communities present in the project influence area. Methodology was based on an ethnographic and cartographic approach to understand the ways said communities relate and perceive that territory and the way its members use it. Officers from the Ministry of Interior conducted a visit from a cartographic approach to measure coordinates, get photographic records, identify and observe settlements, transit and mobility areas traditions and customs.

After the visit by the Ministry of Interior and Concesionaria Vial Union del Sur, this agency decides to partially revoke Administrative Act 111 of February 22 2016 and Certify through Resolutions No. 22 dated August 1st 2016 and No. 23 of August 1st 2016 "Indigenous Communities Montaña de Fuego Council and Catatumbo Council members of Quillasinga Nation ARE present in the Rumichaca – Pasto 4G "Concesion Project under APP No. 15 Scheme dated September 11 2015" Functional Units 4 and 5 subsection 1; located in Tangua and Pasto jurisdiction district.

After the certification issued by the Management Office of Pre-Consultation of the Ministry of the Interior, the Licensee requests from this government department to carry out the respective Pre-consultation and installation of the pre-consultation with these certified Native Councils in the area of influence of the road project.

#### Background of the Settlements of Indigenous Communities of the Quillasinga People in the Municipality of Pasto.

Since the mid-1990s some of the old indigenous partialities that existed in Pasto, began the process of reconstituting their native reservations and councils. Today, in four townships of the municipality of Pasto there are organized councils and a large portion of its inhabitants acknowledge themselves as natives of the Quillasinga people. This process of ethnic assertion began in the mid-1990s by inhabitants of El Encano, later on by inhabitants of La Laguna and Cabrera, the same thing happened in Genoy in the year 2008 and similar processes take place in Obonuco, Mocondino and of late in the area of Aranda. According to a memorandum: MEM14-000030039-DAI-2200, of 8 September 2014, the Ministry of the Interior certifies; -- Upon review of the database of the Managing Office of Indigenous Affairs, Deputy Director of Registration, the following communities that are acknowledged at the municipality of Pasto as follows: - El Encano - Refugio del Sol, Quillasinga Reservation - La Laguna – Quillasinga Community - Genoy

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– Quillasinga Community - Obonuco – Quillasinga Community - Nonetheless, there are other communities in the municipality that are in the process of becoming certified before the Ministry of the Interior once they have incorporated themselves through a minute of possession of their representatives; in this case, besides the communities mentioned above, the Indigenous Communities of Mapachico and Aranda should be considered. The Quillasinga Indigenous Reservation Refugio del Sol, at the Encano township, is the only indigenous community of the municipality that has an acknowledged territorial reservation through resolution 20020 of 14 December 2009. the acknowledged the reins of the reservation total 551 hectares (Municipal Development Plan 2014-2027).

The Quillasinga Native Council of Genoy has as governor Gregorio Aparicio Pasichana, the council has the official acknowledgment of the Managing Office of Indigenous Affairs of the Ministry of the Interior through resolution No. 0085 of 20 October 2009, no reservation has been incorporated. The Quillasinga Native Council of La Laguna is acknowledged by the Managing Office of Indigenous Affairs of the Ministry of the Interior through resolution No. 0139 of the 4th of December 2007, its governor is Ernesto Pejendino, no reservation has been incorporated. The most recent one is the Quillasinga Native Council of Obonuco, acknowledged by the Managing Office of Indigenous Affairs of the Ministry of the Interior through resolution No. 0073 of the 4th of June 2014, its governor is Efrén Achicanoy, no reservation has been incorporated. The Quillasinga Native Council of Mocondino, governed by Silvio Naspiran, is constituted through possession minute of officials of the 2nd of February 2012, the acknowledgement resolution from the Ministry of the Interior is being processed. Recently de initiative of incorporating a new Native Council in the Aranda sector, managed by señor Aurelio Chinchajoa, no current data of registration (Municipal Development Plan 2014-2027).

Below is the presentation of progress in the prior consultation process being carried out with the native councils Montaña de Fuego and Catambuco.

Native Council of Montaña De Fuego

**Location**

Located in the municipality of Tangua, department of Nariño, its population according to the census of the Native Council scattered and distributed in 22 villages of the municipality (Map 1). They belonged to the Quillasinga people whose ownership of the

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land is of individual nature, since the figure of the reservation has been dissolved for a number of decades by the inhabitants themselves. Nowadays they are in the process of reconfiguring the territory and giving new meaning to the cultural uses, customs and traditions that hence characterized them as an ethnic group with a collective territory.

Reason why the native counsel Montaña de Fuego, recently integrated, is registered in the office of the Mayor of Tangua through Minute of Possession 001 of 21 January 2016.

#### Structure of the Social Organization of the Council

The structure of the social organization of the Native Counsel is integrated in the following fashion:

- Governor:** (Meller Albeiro Merchancano)
- Senior Aldermer:** (Ruth Yandar)
- Guasicama:** (Mercedes Lagos)
- Treasurer:** (Rodrigo Delgado)
- Senior Sheriff:** (Albeiro Córdoba)
- Deputy Sheriff:** (Lisandro Jojoa)
- Assembly:** (Integrated by the inhabitants that make part of the census in the Native Council)

#### The Prior Consultation with the Native Council Montaña de Fuego

After the request by the Road Licensee Unión del Sur before the Directorate of Prior Consultation of the Ministry of the Interior, The formal Pre-Consultation meeting was held on 10 October 2016 with this native community with the participation of approximately 70 people that were members of the council; the meeting took place at the village El Paramo of the municipality of Tangua, where a number of families of this ethnic group are settled, with peasants/natives that do not consider themselves part of the Council, living together.

During this meeting chaired by the Directorate of Prior Consultation through two staff members of the said Government department delegated to take care of this activity, the national and international regulations together with Legal Precedents for the process of Prior Consultation, were presented. On the part of the Licensee a thorough presentation

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of the company was made and of the road infrastructure project projected for execution between Rumichaca and Pasto.

The methodological route to be developed West jointly presented by the two parties during this meeting: Pre-consultation, installation, construction of baseline and characterization, workshop on the identification of the impacts and management measures, formulation of agreements and establishment of protocols according to the planned methodology and to the regulations on the topic.

During the meeting there was only the accompaniment of officials from the office of the Mayor of Tangua and to represent is from the Secretary of Social and Community Development of the office of the governor of Nariño. In face of the absence of Control and Oversight bodies, the authorities of the Native Counsel represented by their Governor request that the meeting only has the character of pre-consultation and that the opening of the latter be convened for another date in face of the absence of the remaining guarantors that had been convened (See Minute of the Pre-Consultation Meeting).

The meeting for the installation of the Prior Consultation was held on 26 October 2016 with the Native Counsel, through a convening made by the Directorate of Prior Consultation of the Ministry of the Interior. During the meeting, the representative of the Ministry repeats the presentation of the legal and regulatory part and of the stages for prior consultation. The Licensee makes a thorough presentation of the mapping of the road project from the PR 0+000 to PR 28+900 corresponding to the area that will affect the Council. Approximately 60 people from the community participated together with represent in each of the public ministry: offices of the Inspector General, General Controller, Municipal Ombudsman. The Mayor of the municipality of Tangua, the Municipal Planning Secretary, representatives of the office of the Governor of Nariño through the office of the Deputy Secretary of Social and Community Development. From the meeting and formal installation of the consultation, the native community headed by their governor was committed to integrate the workgroups, to be able to move forward the obtaining of the baseline information and the validation of the latter, for the identification of the possible impacts that the project shall have in the territory that they inhabit. To date, the Council is dedicated to the integration of their work teams to begin the activities of construction and validation of the baseline.

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## Native Council of Catambuco

### Location

The Native Council is located in Catambuco, which at the same time is integrated by the townships of El Socorro and Santa Bárbara; all of them in the municipality of Pasto. They identify themselves and consider themselves part of the Quillasinga people recently incorporated and registered before the office of the Mayor of Pasto through the Minute of Possession No. 002 of 1 January 2016. According to preliminary information provided by the governor of the Council, the census of their population is 576 people that are scattered in three townships of the municipality of San Juan Pasto (Catambuco, El Socorro and Santa Bárbara) over 26 villages.

### Structure of the Social Organization of the Council

The structure of the social organization of the Native Council is similar to that of Montaña de Fuego, and is integrated in the following fashion:

Governor:	(Carlos Potosí)
Senior Alderman:	(Juan Masinsoy)
Deputy Alderman:	(Luis Efeire Portilla)
Registrar:	(Mary Cabrera)
First Bailiff:	(Sandra Liliana)
Third Bailiff:	(Bernardo Timaran)
Fourth Bailiff:	(Piedad Chaña)
Assembly:	(Formada por los habitantes que se encuentran censados en el the Native Council)

### The Prior Consultation with the Council Montaña de Fuego

After the request filed by the Road Licensee Unión del Sur before the Directorate of Prior Consultation of the Ministry of the Interior, the formal pre-consultation meeting is held on 10 October 2016 with this native community, convened by the Ministry of the Interior through resolution OFI16-000036124-DCP-2500 (See annex 6. Convening resolution of the Ministry of the Interior to a Pre-consultation meeting), approximately 87 members of the Council participated in the said activity; that meeting took place in the township El Páramo of the municipality of Tangua, where a few families of this

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ethnic group are settled and were campesino/natives who do not consider themselves members of the Council, live together.

The meeting began with the first stage of Prior Consultation, as follows:

General aspects of the prior consultation process were discussed together with the related duties of attending and participating in the consultations of the Ministry of the Interior.

Legal aspects of the prior consultation are explained, its characteristics and stakeholders, also on account of the Ministry of the Interior. Immediately after the stages of the prior consultation are mentioned according to the Presidential Executive Order No. 10 of 2013: Certification, prior consultation, installation and beginning of the process of Prior Consultation; analysis of the identification of impacts and management measures; drafting of agreements; formalization of protocols; follow-up of agreements and closing.

The general socialization of the Road Project Rumichaca - Pasto is made by the Road Licensee Union del Sur.

The methodological proposal to be developed within the framework of the prior consultation is presented on account of Concesionaria Vial del Sur, which is agreed upon with the community and the respective approval is made as follows:

STAGE	PROPOSED DATE
Pre-consultation	10 October 2016
Installation	26 October 2016
Construction and characterization baseline (Company and Community)	From the 11 October to the 25 November 2016
Workshop of identification of impacts and management measures	30 of November 2016 01 December 2016
Formulation of Agreements	09 December 2016 10 December 2016
Protocolization	20 December 2016 (Tentative)

Follow-up and closing of agreements	To be defined by the Ministry of the Interior
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**Table N° 1 Methodological Route Prior-Consultation Process Native Council Montaña de Fuego**

Source: Road Licensee unión del Sur, 2016

During this meeting there was only accompaniment of officials of the Office of the Mayor of Tangua and two representatives from the Office of the Secretary of Social and Community Development of the Office of the Governor of Nariño. In the absence of the Control and Oversight bodies of the authorities of the Native Council headed by its governor, request that the meeting only has the character of Pre-consultation and that the opening of the latter be convened for the 26 October 2016, in face of the absence of those that were convened (See Annex 7. Minute Pre-consultation Meeting Council Montaña de Fuego).



Image 1 and 2. Ceremony for the installation of the Pre-consultation meeting and signature of the meeting minutes for the Native Council Montaña de Fuego.

Source: Concesionaria Vial Unión del Sur, 2016

**Opening and installation of Pre-consultation**

On the 26th of October 2016, the installation meeting of Pre-consultation is held with the Native Council through a convening made by the Directorate of Prior Consultation of the Ministry of the Interior through resolution OFI16-000037910-DCP-2500 (See annex 8. Formal convening to Opening and installation of Consultation Council Montaña de Fuego)

the Inspector General, the Comptroller, the Municipal Ombudsman, the Mayor of the municipality of Tangua and the Municipal Planning Secretary, representatives of the Governor's Office of Nariño through the office of the Deputy Secretary for Social and Community Development.



Image 3. Delivery of command staffs during the installation of the previous consultation meeting of the Native Counsel Montaña de Fuego.

Source: Road Licensee Unión del Sur, 2016

General aspects of the prior consultation process were discussed together with the related duties of attending and participating in the consultations of the Ministry of the Interior.

Legal aspects of the prior consultation are explained, its characteristics and stakeholders, also on account of the Ministry of the Interior. Immediately after the stages of the prior consultation are mentioned according to the Presidential Executive Order No. 10 of 2013: Certification, prior consultation, installation and beginning of the process of Prior Consultation; analysis of the identification of impacts and management measures; drafting of agreements; formalization of protocols; follow-up of agreements and closing.

The Licensee made a thorough presentation of the project map from the PR 0+000 up to the PR 28+900 corresponding to the area of influence, specifying: design of the map,

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thorough design, required environmental studies and environmental license for the execution of the project, social and archaeological component.

Starting from the meeting and formal installation of the consultation, the native community headed by governor Meller Merchancano committed themselves to integrate the workgroups to be able to jointly carry out the gathering of baseline information and validation of the latter aiming to begin identifying the possible impacts that the project will imply in the territory that they inhabit.

That presentation of the methodological route was made during the meeting of 10 October 2016, ratifying the stages and dates. (See Annex 9. Minute of the installation of the pre-consultation meeting Council Montaña de Fuego).

Mapping of the baseline and knowledge of the native territory of Montaña de Fuego

A scheduled joint activity was held on 18 November 2016 in the home of the native governor Meller Merchancano , corresponding to the discussion of the project, presentation of the community work team, definition of the work plan and presentation of the economic proposal of the community.

Once the technical aspects of the project were discussed, they proceeded to review the methodological route established in the pre-consultation meeting; on the subject matter, the native governor requested the postponement of the dates since in his opinion they cannot be met because there is still a lot of work pending, therefore he stated that on 30 November 2016 in 1 December 2016 no presentations of progress can be made. Communication is established on the subject matter with the Ministry of the Interior, notifying them of the situation for the determination of the new date for the activity of identifying the impacts and management measures.

According to the work steam of the community it was reported that it is integrated by: one (1) attorney, one (1) sociologist, one (1) social worker, one (1) environmental engineer, one (1) project consultant and five (5) technicians. (See Annex 10. Minute of the meeting and attendance 18\_11\_2016 Montaña de Fuego)

Continuing with the process the execution of activities was established for the mapping of the corresponding baseline information.

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Presentation of the Biotic and Abiotic and social cadastral component of the Study of Environmental Impact-EIA (acronym in Spanish) of the Functional Units 4 and 5.1, double lane highway project Rumichaca-Pasto:

The discussion of the information contained in the Study of Environmental Impact (EIA) by environmental professionals of the SH Consortium and of the Licensee, including the biotic, abiotic, cadastral partner and the preventive archaeology program according to the primary information based on studies and analysis made on the route of the Corridor. It was additionally explained that one of the objectives of the execution of the Baseline is compiling the additional information provided by the members of the Native Counsel Montaña de Fuego with the accompaniment of the Prior Consultation work team of the Corporation and the community, with the aim of drafting the impacts matrix for the native community. (See Annex 11. Meeting and attendance minute 05\_12\_2016 Montaña de Fuego)



Images 4 and 5. Meeting of the mapping of the baseline and the familiarization with the territory of the Native Council Montaña de Fuego.

Source: Concesionaria Vial Unión del Sur, 2016

Biotic and social cadastral identification of the run:

On 6 December 2016, into highway corridor Rumichaca - Pasto, of the municipality of Tangua, the field run was performed with the participation of the Prior Consultation Teams both of the community and the Licensee with the aim of identifying the area of influence of the road project and its territorial affectations for the performance of activities of removal of materials, stripping and ZODMES, among others; in the said run

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the environmental Inspector of the CVUS team goes forward explaining to the team of the Native Counsel Montaña de Fuego the mapping of the way and the construction interventions of the project with the specifications for the ethnic communities of the area of influence of Tangua, in its social, cultural (archaeological), environmental aspects involving the project.

Comments were made by the Council Team Montaña de Fuego during the run about the impacts and affectations that the mapping of the way will imply during the execution of the works, in all aspects of the lives of the communities. 12 people from the community participated in the activity with the accompaniment of the professionals of the Road Licensee Union del Sur. Their run began in the UF-4 from the PR 00+000 to PR 28+900.

The CVUS addressed each of the queries of the participants of the Counsel, providing the corresponding answers from the environmental, technical, social and archaeological areas; additionally they gave the councilmembers the corresponding orthophotomaps of the area of direct influence of the Native Council Montaña de Fuego. (See Annex 12. Meeting and attendance minute 06\_12\_2016 Montaña de Fuego)





Images 6, 7, 8 and 9 Run for the explanation of the mapping of the project and technical aspects

Source: Concesionaria Vial Unión del Sur, 2016

#### Social-economic datasheet and social mapping:

The governor of the Council, registrar, community members, consultants and the company met at the facilities of SENA on 7 December 2016, beginning the discussion of the social datasheet reviewing each and every item such as: location, demography, morbidity, mortality, health and education among others. Afterwards the community and their advisors requested space for an internal meeting and review the content of the datasheet; once the said document was reviewed by the Council the past the floor to the company to start filling it out, thus proceeding with the gathering of information. The filling out process was not finished that day because the committee had to retire due to another engagement; therefore, the community members committed themselves to finish filling out the datasheet of social characterization. The community stated that no minute of that meeting should be drafted. (See annex 13. Attendance list)



Images 10 and 11. Meeting for the social mapping and social datasheet of the Native Council Montaña de Fuego

Source: Concesionaria Vial Unión del Sur, 2016

The gathering of information for the social mapping of the Council Montaña de Fuego is pending, requiring to agree on a date for performing the joint task between the community and professional staff of the Licensee Concesionaria Vial del Sur.

Pre-workshop of identification of impacts and management measures:

On 10 December 2016 at the offices of the Licensee Concesionaria Vial Unión del Sur was held the corresponding meeting to the pre-workshops with the aim of performing the joint identification by the community and the company, of the environmental impacts and the corresponding management measures.

Governor Meller Merchancano stated that the activity of that day corresponded only to the discussion on the part of the CVUS of the impacts that have been identified by the company, in face of the fact that the Council needs time to identify the impacts to submit a proposal from the cosmic-vision and philosophy of the Native Council of Montaña de Fuego.

Immediately after the professional team of the Licensee explained each of the activities to be carried out according to the constructive stages of the project; likewise, it disclosed the proposed matrix for the stage of identification of impacts and management measures that included the established impacts in the Study of Environmental Impact (EIA, in Spanish), drafted by the company.

It is explained that the matrix was drafted by implementing a thorough, clear and simple methodology, allowing the identification and analysis of the impacts and their classification according to the management measures (Preventive, mitigation, correction and compensation), making it clear that such document can be modified or expanded if necessary and if the community so requires it.

The attendees from the Council Montaña de Fuego stated that they are in agreement with the said matrix and a copy of it in digital format is turned over so that it can be completed according to the internal activity of identifying the impacts and management measures to be made by the community. (See Annex 14. Meeting and attendance minute 10\_12\_2016 Montaña de Fuego)

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Images 12 and 13. Meeting for pre-workshop of identification of impacts and management measures Native Council Montaña de Fuego  
Source: Concesionaria Vial Unión del Sur, 2016

#### Identification of impacts and management measures:

On 13 December 2016 took place the meeting for the identification of impacts and management measures with the Native Council convened through resolution OFI16-000043566-DCP-2500 made by the Directorate of Prior Consultation of the Ministry of the Interior (See annex 15. Convening for the stage of identification of impacts and management measures).

The meeting had the participation of 79 people, among them: the Community, advisers of the Council, Representatives of the Inspector General, the People's Ombudsman, the Municipal Ombudsman, the Regional Corporation of Nariño (CORPONARIÑO), the National Agency of Infrastructure (ANI, in Spanish) the Deputy Inspector General for the Agriculture and the Environment, the mayors office of the municipality of Tangua, the Secretary of Municipal Planning, representatives of the office of the governor of Nariño through the Deputy Secretary of Social Life Community Development.

During the meeting, the representative of the Ministry does one more time the presentation of the legal, regulatory and stages of the previous consultation.

On its part the Licensee discloses to the attendees the general activities included in the execution of the project and discusses the model of the matrix of impacts proposed for the construction and operation stage on the Road Corridor Rumichaca - Pasto, together

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with the elements to evaluate and the impacts identified in the Study of Environmental Impact.

The councilmembers intervene stating that the station of identifying the impacts and management measures cannot be done or finished, for reason of the timing of the councilmembers for performing the internal activities.

In the framework of the stage of identification of the impacts and mannequin measures (See annex 16. Minute of the meeting Identification of Impacts and Management Measures), it was established that in view of the fact that it had not been possible to fulfill this stage of the Previous Consultation and therefore the methodological route agreed on 10 October 2016 the Governor and the Council request reconsidering the dates, which in the first instance are defined internally (councilmembers and technical team) and later on are agreed with the company, remaining as follows:

STAGE	PROPOSED DATE
Pre-consultation	10 October 2016
Installation	26 October 2016
Construction and characterization baseline (Company and Community)	From the 15 December 2016 to 19 February 2017
Workshop of identification of impacts and management measures	20 February 2017
Formulation of Agreements	23 March 2017
Protocolization	24 March 2017
Follow-up and closing of agreements	Pending definition by the Ministry of the Interior

Table N° 2 Methodological Route Reconsidering Process of Prior Consultation Native Council Montaña de Fuego  
Source: Road Licensee unión del Sur, 2016

The Prior Consultation with the Native Council of Catambuco

Below is a description of the activities performed with the community of the Native Council of Catambuco, in the prior consultation processes for the double lane roadway project Rumichaca-Pasto.

It is important to highlight that the information of the activities, both of the biotic identification runs and social-cadastral, as well as the pre-workshops and the social mapping workshops, workshops for the identification of impacts and management measures presented below, are preliminary results that will be substantiated as progress is made in the prior consultation processes.

**Pre-consultation, opening and installation of the Prior Consultation process**

Once obtained the certification granted by the Directorate of Prior Consultation of the Ministry of the Interior and the request made by the Road Licensee The opening of the prior consultation in the Native Council was done on the 11 October 2016; The prior consultation and the installation of the prior consultation are done on 11 October 2016 at the location of the Council located in the center of Catambuco. Following the agenda, previous ritual ceremony and installation of the meeting by the authorities of the Council, that legal, regulatory, judicial parts are presented, and stages of the Consultation by the representative of the Directorate of Prior Consultation (Annex 17).

Subsequently, the Concessionaire gave a comprehensive presentation of the project and finally, there was a proposal and approval of the methodological path to be executed via consultation in a joint fashion. However, they agreed that the methodological path under conditions of the authorities of the native community, in such a way that dates after the implementation and drafting of baseline information was to be established tentatively, given the social and cultural dynamics of Quillasinga people (see Table N°3).

STAGE	PROPOSED DATE
Pre-consultation and Installation	11 October 2016
Construction and characterization baseline (Company and Community)	November 01 to 23 2016
Workshop of identification of impacts and management measures	November 24 2016 (Suggested)
Formulation of Agreements	December 06 2016 (Suggested)

Protocolization	December 07 2016 (Suggested)
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Table N° 3 Methodological Route Prior-Consultation Process Catambuci Native Council  
Source: Road Licensee unión del Sur, 2016

However, for internal situations in the Native Council community, it was not possible to comply with the methodological path initially set, therefore it was necessary to establish a timetable or route that would allow the development of activities planned. Thus, on February 18th of the year 2017 it was decided to conduct the identification of impacts the (see annex 18).

#### Workshop of identification of impacts and management measures

So as to identify impact and environmental management measures, the community of the Native Council was invited on December 14th this year. However, this activity could not be carried out by the Ministry of the Interior wanted to get to know the area, progress of prior consultation process developed with the community of Catambuco Native Council.

Therefore, there was a meeting with of the Regional Environmental Authority officials Corponarino, the Environmental Authority of Environmental Licenses-ANLA, Pasto Municipality, HMV audit, National Agency for Infrastructure-ANI, and Catambuco Native Council community, among others (see annex 18).

Workshops and pre-workshops were held with the community in the area, including the evaluation matrix of impacts, with particular emphasis on the environmental management measures would be developed in the next phase, depending on the time allocated by the Community, once they have conducted works of thought.

#### Baseline drafting and recognition of Catambuco Native territory

##### Biotic and social-Property Visit:

There was a visit on December 5th 2016 together with the Catambuco Native Council community so as to identify the area of influence of the road project and its territorial impact for the development of demining activities, ZODME, materials, among others.

Thirty-one people members of focus groups made of children, young and elderly folks took part of this process, with the accompaniment of the professionals of the Concesionaria Vila Unión del Sur. Their journey started at Piquisiqui PR 27880, ending up in the PR 32700 (see annex 19).

The council Elders identified trees of cultural importance during the field trip, among them: alder, pine, chilacuan, capuli, eucalyptus and bushes like chilca, mote, pumamaqui, medicinal shrubs as the cujaca, medicinal plants like chicorea, llamata, pillo, verbena, cape gooseberry, mushrooms, pepesapo, sabolla straw paramo, and picuy (food for guinea pigs).

They also showed evidenced of wildlife presence via direct observation of a fox's carcass in the corridor, confirming together with the community that this territory is a biological corridor for different species of wildlife.

They also identified residential property of Council members in the project impact area.

Teniendo en cuenta los hallazgos y preocupaciones de la comunidad frente a la afectación que el proyecto vial ejercerá sobre las fuentes de agua, áreas de cultivos, y viviendas, los profesionales de la Concesionaria explicaron las formas como se desarrollaran los procesos de adecuación y construcción de la doble calzada, resaltando que cada actividad que se desarrolle y que genere alteración en los recursos naturales y el medio ambiente, tendrá una medida de acción que permita prevenir, corregir, mitigar y/o en su defecto compensar los impactos generados. Resaltando además que para ese sector no se hará aprovechamiento de fuentes hídricas.

Taking into account the community findings and concerns to the effect that the road project will have on water sources, crop areas and housing, the Concessionaire experts explained the ways to develop adaptation processes and construction of the two-way road, highlighting that each activity to develop and the impact on natural resources and the environment, measures will be taken to prevent, correct, mitigate and/or compensate for impact. Highlighting that this sector will not use water sources.

As they continued with the tour, they located the projected site for the construction of the pedestrian bridge, which from the community point of view had to be relocated to a place with more traffic.

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Images N° 16 and 17 Biotic and social-property Visit at Catambuci Native Council.  
Source: Native Council de Catambuco, 2016

During the tour, the community mentioned the impact companies in the area had on natural resources and sacred sites.

After this visit, the Native Community Council has taken field trips on their own, in order to identify new impact generated by the road project in their territory. Such information has been presented in workshops.

Presentation of Biotic and Abiotic components, and Social-Property of the Environmental Study Impact of the Environmental Impact Study-EIA, Functional Units 4 and 5.1, two-way road project Rumichaca-Pasto:

On Thursday, December 6th 2016, SH consortium experts presented, the results of the environmental impact study, components: biotic, abiotic and social-property in The Quillasinga Catambuco Native Council (images no. 16 and 17). Then the community expressed that their cosmovision is composed of all elements into one, life. Hence, they requested to support the information presented taking into account cosmovision and the ethnic approach that the community has towards plants recorded in flora inventory. This approach will be applied in the same way for wildlife at the Santo Tomas - Catambuco School. (see annex 20)



Image N° 18 Presentation of EIA before the Catambuci Native Council Community.  
Source: Native Council de Catambuco, 2016

#### Social Mapping workshop:

A workshop was held of social mapping and application of social tabs in four working groups On Friday, 7 December, at Santo Tomas - Catambuco School with the support of prior consultation experts from Concesionaria Vial Unión del Sur, to address territory issues: Territory (Inti Raymi), Pacha Mama Culture (Environmental) and productive aspects (Quillaguayra).

En la mesa de territorio, la comunidad ubicó en un mapa, los sitios sagrados, entierros, vías de acceso a veredas, a la carretera panamericana y sitios donde se genera contaminación, además las fuentes hídricas que podrían verse afectadas con el proyecto y los límites del territorio.

In the board of territory, the community placed on a map, sacred sites, burials, access roads, the Pan-American highway and sites where pollution is generated, in addition to water sources that could be affected by the project and limits of the territory.

In the board of cultural aspects, the main festivities of the community were identified: The Virgin of Guadalupe, celebrated on December 12, the religious temple, which was built by the indigenous community of the Catambuco shelter through the mingas. The presence of musical groups, dancing and traditional dances (San Juanito, Guaneña,

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Andean rhythms) part of the community, sites for energetic discharge, like the Río Bobo dam and ancient sites like the Coba Negra. The guinea pig is part of the gastronomy, the earthenware vessels are currently used to store chichi, the game of chaza, which is a cultural tradition that still remains and has remained from generation to generation. The community said that these are cultural aspects that “survive” and that they are trying to rescue and avoid them be lost with the construction of the two-way road.

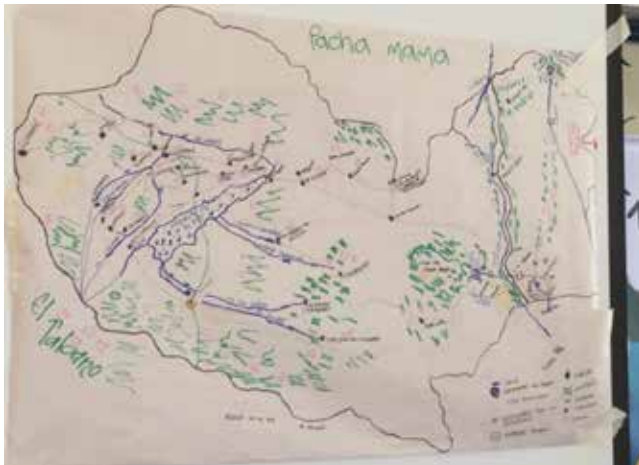


Image N° 19 Social Mapping Workshop performed with the Community of the Catambuco Native Council.

Source: Cabildo Indígena de Catambuco, 2016

In the Environmental board called: the Pacha Mama (Our land) the participants outlined the areas where the forests are preserved, where the fauna is located, and where the main water sources are located: Miraflores, San Jose and Taminango (Located in limits with Obonuco, Village of Vocacional, the Miraflores stream located in the Village of La Merced, which supplies two aqueducts, also they mentioned some streams that dried up due to the current projects, they also identified contaminated water sources such as the Miraflores stream, which has lost its biotic diversity, evidenced in the absence of fish at the moment. Other sacred sites were identified, located far from the way where it is intended to build the project, for example the Barranquilla cave.



Image N° 19 Social Mapping Workshop performed with the Community of the Native Council Catambuco.

Source: Cabildo Indígena de Catambuco, 2016

In the Environmental board called: the Pacha Mama (Our land) the participants outlined the areas where the forests are preserved, where the fauna is located, and where the main water sources are located: Miraflores, San Jose and Taminango (Located in limits with Obonuco, Village of Vocacional, the Miraflores stream located in the Village of La Merced, which supplies two aqueducts, also they mentioned some streams that dried up due to the current projects, they also identified contaminated water sources such as the Miraflores stream, which has lost its biotic diversity, evidenced in the absence of fish at the moment. Other sacred sites were identified, located far from the way where it is intended to build the project, for example the Barranquilla cave.

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Image N° 20 Social Mapping Workshop performed with the Community of the Native Council Catambuco.

Source: Cabildo Indígena de Catambuco, 2016

In the production component board, called Quilla Wayra (Wind of the Moon), the crops production times of the community were identified, as well as the medicinal use of plants. The community expressed that for the crop is important to have a vegetal layer, since it helps to maintain fertility in the crops. Species of trees such as aguacatillo, pumamaque, motilón, cedrillo, wax palm, arrayan, cerote, mocasillo, ripe, colombian wild pine, matial and urco salado maintain the water sources (see Annex 21).

#### Pre-workshop for the identification of Impacts

On December 9, 2016, the pre-workshop for the identification of impacts and management measures, performed with the accompaniment of the officials from the Highway Concessionaire Unión del Sur at the Santo Tomas-Catambuco Educational Center, was focused on the identification of environmental impacts that the project would generate in the area of influence of the Native council in the Catambuco territory, including those generated before and the current ones, such as the effect of the factories built close to the houses of the village.

Subsequently, the prior consultation team clarified terms such as: environmental impact, positive environmental impact, negative environmental impact, environmental impact study, environmental management plan, management measures, preventive measures, mitigation measures, corrective measures and compensatory measures. The

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community described the impacts identified by the community, framed in their worldview.



Image N° 21 Impact identification pre-workshop with the Community of the Native Council Catambuco.

Source: Cabildo Indígena de Catambuco, 2016

Among the activities analyzed, the identification of impacts by the community for ZODMES was pending, since the analysis of this information depends on an additional field visit to each of the proposed sites, and the identification of the particularities in each one, as well as the technical explanation proposed by the concessionaire.

As a result of this workshop, information was obtained emphasising on the worldview of the community, which was recorded on billboards. This information was integrated with the impact matrix proposed by the Highway Concessionaire Unión del Sur (see Annex 22. Impact Assessment Matrix).



Image N°22 y Impact identification pre-workshop with the Community of the Native Council Catambuco.

Source: Cabildo Indígena de Catambuco, 2016

### Considerations

It is necessary to state that a great part of the information that allows to characterize indigenous communities in the Native Councils of Montaña de Fuego and Catambuco will be taken in other meetings to carry out and performance of the base line in the framework of the previous consultation, where by the use of formats, index cards, unstructured interviews, workshops and social Mapping, will be possible to document the characterization of these indigenous communities. However, this activity is in process of execution as agreed in the methodological route, which means, as there is a progress in the stages of the prior consultation process, the socio-economic component of the ethnic communities' chapter will be compiled, systematized, analyzed and constructed, according to the terms of reference of Resolution 0751 from March 2015.

Therefore, it is restated that at the date of presenting this study, the processes of prior consultations with the Indigenous Native Councils Montaña de Fuego and Catambuco are under execution, therefore, the information included in this document will be preliminary information, waiting to be collected in the baseline in a participatory manner with the members of the indigenous communities mentioned above. The supporting documents that give an account of the process performed with these communities can be seen in annex 5.3.5.2.a

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### 5.3.6 Archaeological Component

The results of the archaeological study carried out in the area of intervention established for the Pedregal - Catatumbo section of the Rumichaca - Pasto road project, according to the authorization granted by the Colombian Institute of Anthropology and History (ICANH), that allows the construction of historical and archaeological memory sites in the municipalities located in the intervention area in annex 5.3.6a, the corresponding document filed before the mentioned authority is referenced in annex 5.3.6b and the archaeological survey report is in annex 5.3.6c

### 5.3.7 Political-organizational component

This component presents the political-administrative characteristics, institutional presence and community organization for the functional units 4 and 5.1, made up by the major and minor territorial units of the area of influence of the socio-economic area Pedregal Catambuco. This is built from the official secondary information found in the municipal and departmental development plans, as well as in the respective land management studies.

#### 5.3.7.1 Political-Administrative Aspects

##### Functional unit 4

##### Municipality of Imués

##### Political and administrative aspects

The Municipality of Imués as an official entity of the municipal order, belongs to the sixth category, where most of the municipalities of the Department of Nariño are located, according to the guidelines of Law 617 of the year 2000.

This Municipality is located in the south of the Department of Nariño at a location of 1°04' North latitude and 77°30' west longitude, 55 km from the city of Pasto, 19 km from the city of Túquerres and 1300 meters from the paved road Pasto - Tumaco; Its

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total extension is 76 Km2 on a mountainous orographic terrain in the Andean system. It was established in the year of 1572 by the cacique Carlos Quiscualtud Imués (Imues, Alcaldía municipal, 2012).

The Municipality has its limits, to the north with the municipalities of Guaitarilla and Yacuanquer, to the south with the municipalities of Funes, Iles and Ospina, to the east with the Municipality of Yacuanquer and to the west with the municipalities of Ospina and Túquerres (Imués, Alcaldía Municipal, 2012)

### Municipal organization

The Municipality of Imués is organized according to the principals contained in Act 1551 of 2012, its organizational structure is made up by the dependencies: The Mayor's Office, followed by the municipal council and the municipal attorney, the corresponding office of legal advice and in subordination of the secretaries of planning and public works, the general office of government, community development and culture, recreation and sports, the secretary of finance and the secretary of public health, and also the municipal unit of justice belongs to the general secretary.

### Administrative political division

Table 5.3.49 present land use planning of the Municipality and the identification of the the political – administrative división, townships and their respective villages.

Table 5.3.41 Political administrative division of the Municipality of Imués

<b>DIVISION</b>	<b>INTEGRATED BY</b>
<b>Township of Pedregal</b>	El Pedregal and Pilcuán.
<b>Township of Neira - Santa Ana</b>	Neira Santa Ana, San Pedro, Imbued, Campo Alegre, Portachuelo, San Buenaventura, Pescadillo and La Sequía.
<b>Township of Valencia San Isidro</b>	San Isidro, El Carmen, Camuestés and La Loma.
<b>Town Inspection</b>	Located at: Villages of Pilcuán Viejo, San

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DIVISION	INTEGRATED BY
	Buenaventura, Cuarchud Alto, Alizal, Tablón Betania. Townships of San Isidro, Pedregal and Santa Ana, and in the Municipal capital Imués.
<b>Villages</b>	Neira Santa Ana, Valencia San Isidro Alto, Centro and Bajo, El Pedregal, San Buenaventura, Portachuelo, Campo Alegre, Pescadillo, Imbued, San Pedro Alto and Bajo, Cuarchud Alto and Bajo, Camino Viejo de Bolívar, El Alizal, Camuestés, El Carmen, El Tablón de Betania, Paredón, La Loma, Bellavista Alto and Bajo, Chirristés, San José, Silamag, Almag, Santa Rosa, Pilcuan.

Source (Imués, Alcaldía municipal, 2012)

Figure 5.3.86 presents the political administrative división of the Municipality of Imués



Figure 5.3.84 Political Administrative division Map of the Municipality of Imués  
Source (Imués, Alcaldía municipal, 2012)

According to the information previously presented regarding the Municipality of Imués, minor territorial units of the segment Pedregal Catambuco, part of the area of influence of the socioeconomic environment are the Villages of Pilcuán and El Pedregal, which show their limits in Table 5.3.50:

Table 5.3.42 Minor territory units' limits in the area of influence of the Project, part of the Municipality of Imués

TERRITORIAL UNIT	BOUNDARIES
<b>PILCUÁN</b>	To the north with Village of Pedregal To the south with the Village of El Tablón To the east with Río Guátara To the west with the Village of Silamag
<b>PEDREGAL</b>	To the north with Village of Santa Rosa To the south with Rio Guátara To the east with the Village of Inantas Bajo To the west with the Village of Pilcuan

Source: (Géminis Consultores Ambientales S.A.S., 2016)

From the above it is necessary to emphasize that this Municipality in its administrative political organization is divided in townships and their respective villages, with a big percentage located in the rural zones of the Municipality. In addition to the above, it is recognized that the zone of influence is touristic, where constant migratory movements are made.

#### Municipality of Yacuanquer

##### Political and administrative aspects

According to the information of the Territorial Planning Scheme, the Municipality of Yacuanquer, located in the Andean region, in the center of the south-east of the Department of Nariño, sits in the foothills of the central eastern mountain range, on the slopes of the South side of Volcan Galeras, part of the South Pacific basin. It has a territorial extension of 11 km<sup>2</sup> and regarding the meridian of Greenwich, it is located at 010 07' 07" north and at 770 24' 18" west; Its altitude is about 2.670 m.a.s.l.

Its population settlements are located at 1850 to 2,850 m.a.s.l. the distance from the city of Pasto is 25 km, from the Pan-American route and the southern section of the ring road to Galeras (Yacuanquer A. M., 2015 - 2027).

The Municipality limits to the north with the Municipality of Consacá, to the south with the Municipality of Funes, to the east with the Municipality of Tangua and to the west with the municipalities of Guaitarilla and Imués (Yacuanquer A. M., 2015 - 2027).

The Municipality of Yacuanquer belongs to the central sub-region of the Department of Nariño, which is integrated by the municipalities of: Yacuanquer, Tangua, Pasto, Nariño, La Florida and Chachagüi.

#### Administrative political division

The Municipality of Yacuanquer is organized in twenty-two villages and a municipal capital, Table.5.3.51 presents its political – administrative division.

Table.5.3.43 Political - Administrative division of the Municipality of Yacuanquer

DIVISION	INTEGRATED BY
<b>Municipal capital</b>	Inhabited Space
<b>Villages</b>	La Estancia, Inantas Alto, Inantas Bajo, Tasnaque, La Cocha, Tacuaya, Minda, La Cuchilla, Taindala, Chapacual, La Guaca, Arguello Alto, Arguello Bajo, Zaragoza, Mohechiza Bajo, Mohechiza Alto, San Felipe, El Rosario, San José de Córdoba, La Pradera, La Aguada and Mejía.

Source: (Yacuanquer A. M., 2015 - 2027)

From the minor territorial units previously shown, those that are recognized as part of the area of influence of El Pedregal - Catambuco segment for the present project are the Villages of Inantas Alto and Inantas Bajo; Table.5.3.52 show the limits of such villages.

Table.5.3.44 Minor territory units' limits in the area of influence of the Project, part of the Municipality of Yacuanquer

TERRITORIAL UNIT	BOUNDARIES
<b>INANTAS ALTO</b>	To the north with Village of Inantas Alto To the south with Rio Guaitara To the east with the Village of Tablón Obraje

	To the west with the Village of Pedregal
<b>INANTAS BAJO</b>	To the north with Village of Tasnaque To the south with the Village of Pedregal To the east with the Village of Inantas Bajo To the west with the Village of Santa Rosa

Source (Géminis Consultores Ambientales S.A.S., 2016)

### Municipal organization

According to information from the Yacuanquer Territorial Planning Scheme 2015-2027, the municipal administration organization presents a suitable structure for the fulfillment of the functions of the different divisions part of it, nevertheless, a greater efficiency in the administrative processes is sought, as well as in the optimization of human talent and physical and institutional resources.

The organizational structure of the Municipality is headed by the Mayor's office, and subordinated to it, there are the following divisions: The secretary of government, the general secretary, the secretary of planning, the treasury, the warehouse, the house of culture and UMATA.

### Political Tendency

In the last mayor elections, the political tendency of the Municipality, according to information from the National Civil Registry, related to the electoral results, it is shown that the preference was for the representative of Partido Cambio Radical, followed by partido de la U, meaning that there is preference for the divergent parties where Partido Cambio Radical obtained the victory with 56.07% of the valid votes.

Regarding elections for the Municipal Council, where nine seats were elected, Tangua Municipality had a preference for Partido de la U, with three seats, followed by the Partido Conservador, which obtained two seats and Partido Cambio Radical, Opción Ciudadana, Liberal, Verde and Polo Democrático, each obtaining a seat. The political

tendency in the Municipality is to the predominant divergent forces and reflected by Partido de la U that obtained a bigger representation

### Municipality of Tangua

#### Political - Administrative Aspects

According to the Municipal Development Plan 2016 - 2019, the Municipality of Tangua is located in the Knot of the Pastos, to the south of the Department of Nariño on the skirts of the Galeras Volcano, between the geographical coordinates Latitude: 01°05'50" Longitude: 77°23'53". The total extension of the Municipality of Tangua is 239 Km<sup>2</sup>, from which 35 Ha correspond to the town center, located on an average altitude of 2403 masl, its average temperature is 14 degrees Celsius. (Alcaldia Municipal de Tangua, 2016)

This Municipality is connected by the Pan-American route to the city of Pasto (25 km), the capital of the Department, through which it has communication with the border cities of Ipiales (63 km in Colombia) and Tulcán (75 km in Ecuador), so the particular characteristic of the Municipality of Tangua are its geographical location and the road infrastructure that has allowed it to have access to the services offered in these cities, likewise the Municipality is located at 60 km from the Antonio Nariño airport in the Municipality of Chachagüi and 281 km from the maritime port of Tumaco. (Alcaldía Municipal de Tangua, 2016)

The Municipality is linked to the original circuit of the so-called ring road to Galeras, which joins 5 other municipalities of the Department: Pasto, La Florida, Sandoná, Consacá and Yacuanquer (Alcaldía Municipio de Tangua - Nariño, 2016); Also the Municipality of Tangua belongs to the Center Subregion of the Department of Nariño, which is integrated by the municipalities of: Tangua Pasto, Nariño, Florida, Yacuanquer, and Chachagüi.

#### Administrative Political Division

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Table.5.3.53 shows the political division of the Municipality of Tangua that is comprised by nine neighborhoods in its municipal capital and eleven townships in the rural zone, which have thirty-six villages.

Table.5.3.45 Political - Administrative Division of the Municipality of Tangua

DIVISION	INTEGRATED BY
<b>Municipal capital</b>	Neighborhoods: Corazón de Jesús, Los Andes, El Carmen, San Rafael, La Paz, Buena Esperanza, Fátima, Bolívar, Urbanización Piedra Grande
<b>Township of Agustín Agualongo:</b>	Las Palmas, El Palmar, Santa Rosalía.
<b>Township of Antonio Nariño:</b>	La Concepción, San Luis Bajo, Birmania.
<b>Township of San Javier:</b>	Villages San Rafael, San Francisco.
<b>Township of Buenos Aires:</b>	Villages La Palizada, Páramo, San Luis Alto.
<b>Township of Tapialquer Alto:</b>	Villages Tapialquer Alto, Guayabal.
<b>Township of Panamericano:</b>	Cebadal, Buena Esperanza, Chávez.
<b>Township of Las Playas</b>	Villages Tapialquer Bajo, Tapialquer Medio, Nazcan
<b>Township of Nuevo Horizonte:</b>	Villages Tambor, Marqueza Alto, Marqueza Bajo, Los Ajos.
<b>Township of Opongoy:</b>	Villages Santander, Las Piedras, La Cocha, Tamborcillo, Arrayanes
<b>Township of Porvenir:</b>	Villages Providencia, San Vicente, Paramillo, Siquitian, El Vergel.
<b>Township of Villacruz:</b>	Villages San Pedro Obraje, Tablón Obraje, Cocha Verde.

Source (Alcaldia Municipal de Tangua, 2016)

The Municipality of Tangua limits to the north with the municipalities of Yacuanquer, Consacá and Pasto, to the east with Pasto, to the south with the Municipality of Funes and to the West with Funes and Yacuanquer, Figure.5.3.87 presents the political map of the Municipality.



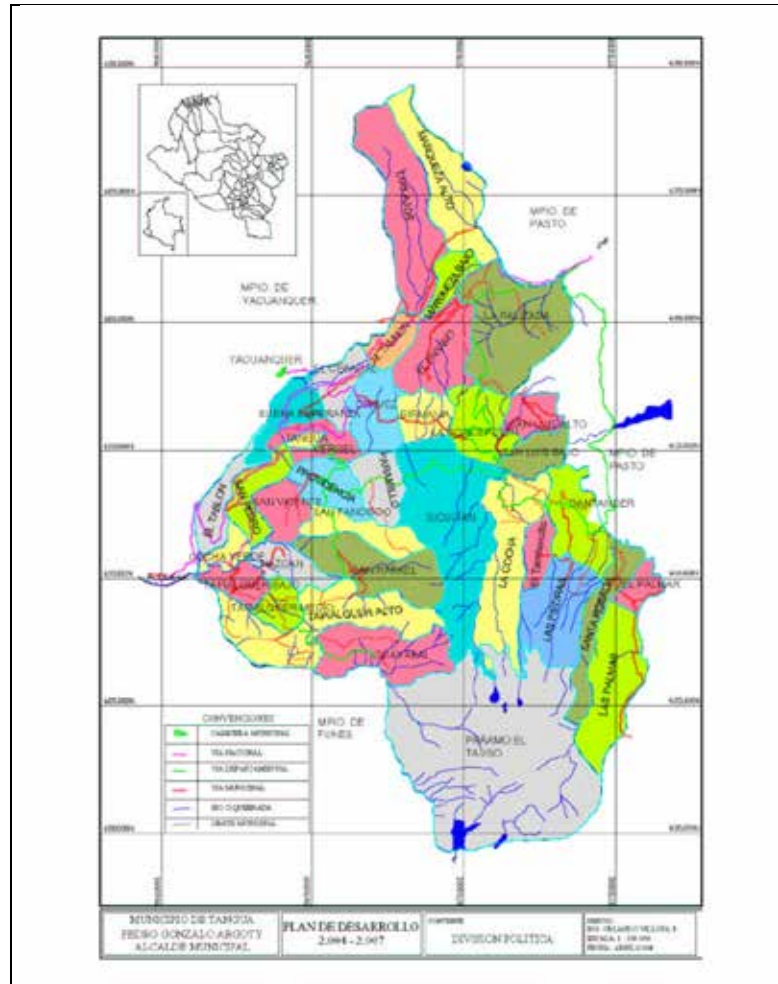



Figure.5.3.85 Political Map of the Municipality of Tangua  
Source (Alcaldía Municipio de Tangua - Nariño, 2016)

It should be noted that regarding minor territorial units presented as part of the Municipality of Tangua, those that are part of the area of influence of the socioeconomic environment for the section Pedregal Catambuco, 13 villages and 3 neighborhoods, from which the limits are set out below in Table.5.3.54.

Table.5.3.46 Minor Territorial Units Limits from the area of influence of the Project belonging to the Municipality of Tangua

TERRITORIAL UNIT		BOUNDARIES
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TERRITORIAL UNIT	BOUNDARIES
<b>COCHA VERDE</b>	To the north with Village of San Pedro Obraje To the south with the Village of Tapialquer Bajo To the east with the Village of Nazcan To the west with the Village of Tablón Obraje
<b>TABLON OBRAJE</b>	To the north with Village of La Estancia To the south with the Village of Cocha Verde To the east with the Village of San Pedro Obraje To the west with the Village of Inantas Alto
<b>SAN PEDRO OBRAJE</b>	To the north with Village of El Vergel To the south with the Village of Nazcan To the east with the Village of San Vicente To the west with the Village of Tablón Obraje
<b>EL VERGEL</b>	To the north with El Cebadal y Buena Esperanza To the south with the Village of Providencia To the east with the Village of Chávez To the west with San Pedro Obraje y Tangua
<b>BUENA ESPERANZA</b>	To the north with Village of Yacuanquer To the south with the Village of San Pedro Obraje To the east with the Village of El Cebadal To the west with the Village of La Estancia
<b>EL CEBADAL</b>	To the north with Village of Mejía To the south with the Village of El Vergel To the east with the Village of Chávez To the west with the Village of Buena Esperanza
<b>CHAVEZ</b>	To the north with Village of El Tambor To the south with the Village of Paramillo To the east with the Village of Birmania To the west with las veredas El Cebadal y El Vergel
<b>EL TAMBOR</b>	To the north with Village of Los Ajos To the south with the Village of Chávez To the east with the Village of El Paramo To the west with the Village of Mejía
<b>EL PARAMO</b>	To the north with Village of Marqueza Bajo To the south with the Village of Birmania y La Concepción

TERRITORIAL UNIT	BOUNDARIES
	To the east with the Village of La Palizada To the west with the Village of El Tambor
<b>LA PALIZADA</b>	To the north with Village of Gualmatán Alto y Marqueza Alto To the south with the Village of San Luis Alto To the east with the Village of Cubijan Alto To the west with the Village of El Paramo
<b>MARQUEZA BAJO</b>	To the north with Village of Marqueza Alto To the south with the Village of El Paramo To the east with the Village of La Palizada To the west with the Village of Los Ajos
<b>LOS AJOS</b>	To the north with Village of Churupamba, Municipality of Consacá To the south with the Village of El Paramo To the east with the Village of Marqueza Alto To the west with the Village of Aguada
<b>MARQUEZA ALTO</b>	To the north with Village of Churupamba, Municipality of Consacá To the south with the Village of La Palizada To the east with the Village of Gualmatán Alto To the west with the Village of Los Ajos
<b>NEIGHBORHOODS CORAZÓN DE JESÚS, FÁTIMA Y BOLÍVAR</b>	Part of the Municipal Capital of Tangua.

Source (Alcaldía Municipio de Tangua - Nariño, 2016)

### Municipal Organization

The organizational structure of the Municipality is vertical interrupted by the line of permanent internal counsel, then the very defined secretariats show their authority over the operating units. This structure is headed by the Mayor's office, followed by the secretary of the office, the internal control office and the office of advisory, subordinate to the above are the secretaries of government, the general secretary, the planning secretary, the municipal treasury, the local management of health and the secretary of culture and sports.

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## Political Tendency

According to the information from the National Civil Registry, on October 25, 2015, the municipal mayor elections were held, in which there was a preference for the representative of Partido de la U, followed by Todos por Tangua group, Unity formed by Partido Conservador and Partido Liberal. Partido de la U won 55.29% of the valid votes. The same way, there was the participation of the minority tendencies represented by the Movimiento Indígena Alternativo y Social – MAIS and Partido Unión Patriótica, with little incidence in the results of the election.

In relation to the elections for the Municipal Council, where eleven seats were elected Tangua Municipality, there was a preference for political parties such as Alianza Social Independiente who obtained three of the eleven seats, followed by Verde y Opción Ciudadana parties, with two seats respectively. Partido Liberal, Cambio Radical, Partido de la U and Movimiento Autoridades Indígenas de Colombia each obtained a seat, the traditional Partido Liberal was the one with the highest percentage of votes regarding these four parties.

## Functional Unit 5.1

### Municipality of Pasto

#### Political - Administrative Aspects

The Municipality of Pasto is located in the south west of Colombia, in the middle of the Andes mountain range, in the Knot of Pastures, it has important orographic accidents, among which stand out: Galeras Volcano, Cerro Bordoncillo, Morasurco, Patascocoy, Campanero, Mayor, Pan de Azúcar and Putumayo. (Pasto, Alcaldía municipal, 2016)

The total area of the Municipality is 1,131 km<sup>2</sup>, of which 26.4 km correspond to the urban area and 1,104.6 to the rural area, in its urban area has 12 communes and 17 townships in the rural area. (Pasto, Alcaldía municipal, 2016)

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The Municipality is linked to the original circuit of the so-called Ring road to Galeras, which links 5 other municipalities of the Department: Pasto, La Florida, Sandoná, Consacá, Tangua and Yacuanquer.

The Municipality of Pasto limits to the north with the municipalities of Nariño and Chachagüi, to the west with the Municipality of Tangua, to the south with the Municipality of Funes and to the east with the Department of Putumayo.


#### Administrative Political Division

The Municipality of Pasto is divided into twelve communes in the urban sector, each with their respective neighborhoods and seventeen townships in the rural area with their respective villages, below there is the administrative political division of the Municipality of Pasto in the urban and rural sectors.

Table 0.47 Political - Administrative Division Municipality of Pasto.

DIVISION		CONSTITUTED BY
<b>URBAN SECTOR</b>		
<b>Community 1</b>	Avenida Santander, Bombona, Avenida Boyacá, Caracha, Centro, Condominio Santiago, El Churo, El Cilindro, El Parque	
<b>Community 2</b>	Aire Libre, Alhambra, Atahualpa, Avenida Boyacá, Avenida Champagnath, Avenida Colombia, Bella Vista, Casa Bella, Coliseo Cubierto, El Olivo, El Prado, El Recuerdo, Fátima, Javeriano, Julián Bucheli, La, Gran Colombia, Las lunas I, las lunas II, Las Violetas I, Las Violetas II, Las Violetas III, Las Violetas IV, Los Abedules, Los Álamos, Los Balcones, Los Olivos, Medardo Bucheli, Navarrete, Normandía, Parque Bolívar, Salomón, San Miguel, Sector San Juan Bosco, Villa Lucia.	
<b>Community 3</b>	Alejandría, Arnulfo Guerrero, Calcedonia, Camilo Torres, Casa Loma, El Ejido, Guamuez, José Antonio Galán, La Esmeralda, La Estrella, Las Brisas, Las Lajas, Las Mercedes, Los Pinos, Mercedario, Pie De Cuesta, Pinar Del Rio, Popular, Pucalpa I, Pucalpa II, Pucalpa III, Rosal Del Oriente, Santa	
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DIVISION	CONSTITUTED BY
	Bárbara, Santa Catalina, Santa Mónica, Villa Oriente, Villaflor I, Villaflor II.
<b>Community 4</b>	Albergue Del Sol, Altos De Lorenzo, Altos Del Campo, Avenida Idema, Belén, Bernal, Betania, Chile, Doce De Octubre I, Doce De Octubre II, El Porvenir, El Rosario, El Tejar, El Triunfo, La Paz, Laureano Gómez, Lorenzo De Aldana, Los Elíseos, Miraflores I, Miraflores II, Praga, Puerta Del Sol, Rincón Colonial, San Germán, San Juan De Los Pastos, Santa Fe I, Santa Fe II, Santacruz, Sendoya, Siete De Agosto, Villa Olímpica, Villa Victoria Villadocente
<b>Community 5</b>	Altos De Chapalito I, Altos De Chapalito II, Altos De Chapalito III, Antonio Nariño, Cantarana, Chambú I, Chambú II, Chapal, Chapal II, El Pilar, El Progreso, El Remanso, Emilio Botero I, Emilio Botero II, Emilio Botero III, Emilio Botero IV, La Minga, La Rosa, La Vega, Las Ferias, Los Cristales, Los Robles, Madrigal, María Isabel I, María Isabel II, María Isabel III, Potrerillo, Prados Del Sur, Salida Al Sur- Urbano, San Martin, Santa Clara, Venecia, Villa Del Rio, Vivienda Cristiana.
<b>Community 6</b>	Agualongo, Altamira, Bachué, Caicedo, Ciudad Jardín, Cooperativa Popular Nariñense, El Estadio, El Libertador, Gilberto Pabón, Granada I, Granada II, Granada III, Granada IV, Inem, Jerusalén, La Cruz, La Palma, Los Fundadores, Luis Carlos Galán, Mijitayo II, Mijitayo, Mijitayo Bajo, Mirador De Niza, Niza I, Niza II, Niza III, Nueva Colombia, Prados Del Niza, Quillasingas, Quito López I, Quito López II, Quito López III, San Carlos, San Miguel De Jongovito, San Sebastián, Santa Isabel, Santanita, Sumatambo, Tamasagra I, Tamasagra II, Tequendama, Valle Lili, Villa De Los Ríos.
<b>Community 7</b>	Avenida Panamericana, Capusigra, Castillos Del Norte, Conjunto El Parque, El Bosque, El Edén, El Rincón De La Aurora, El Rincón De La Panamericana, Francisco De La Villota, La Aurora, La Primavera, Las Acacias, Las Camelias, Los Andes, Los Hexágonos, Rosales II, Rosales I, San Felipe, San Ignacio, Santa María, Villa Aurora, Villa Campanela, Villa

DIVISION	CONSTITUTED BY	
	Sofía, Villa Vergel.	
<b>Community 8</b>	Altamira – San Vicente, Altavista, Altos de la Colina, Anganoy, Arcos Iris, Avenida Panamericana, Balcones de Mariluz, Bello Horizonte, Colón, Colpatria, Conjunto San Diego, El Remanso del Norte, Gualcaloma, Jorge Giraldo, La Castellana, La Cuesta, La Pradera, Las Margaritas, Los Frailejones, Los Héroes, Los Laureles, Los Urapanes, Mariluz I, Mariluz II, Mariluz III, Mirador de San Juan, Miravalle, Montemor, Panamericano, Panamericano II, Panamericano I, Portal de la Colina, Prados del Oeste, Quintas de San Pedro, Remansos del Norte, Salazar Mejía, San Diego, San Juan de Anganoy, San Juan de Dios I, San Juan de Dios II, San Pedro, San Vicente, Sindamanoy, Torres de Pubenza, Veracruz, Villa Jardín, Villas de San Rafael.	
<b>Community 9</b>	Alto Juanoy, Avenida Los Estudiantes, Briceño, Calatrava, Camino Real, Castilla, Chapultepec, Colonial, Colonial, Condominio Morasurco, Conjunto Torobajo, El Aljibe, El Cerámico, El Dorado, El Mirador, El Polvorín, El Refugio, Figueroa, José Ignacio Zarama, Juan XXIII, Juanoy, La Colina, La Riviera, Las Cuadras, La Victoria, Los Nogales, Los Sauces, Luis Brand, Manaca,, Maridiaz, Marsella, Morasurco, Nuevo Amanecer, Palermo, Pandiaco, Paraná, Parque Infantil, Pinos Del Norte, Portal De La Colina, Riviera, San Antonio De Juanoy, Santa Ana, Santa Rita, Sañudo, Tequendama, Terranova, Terrazas De Briceño, Titán, Torobajo, Universitario, Urbanización Zarama, Valle De Atriz, Versailles, Villa María, Villa Campestre.	
<b>Community 10</b>	Aranda, Avenida Aranda, Avenida Oriental, Avenida Oriental Rio Pasto, Buenos Aires, Cementerio, Condominio Bellavista, Corazón De Jesús II, Cra 27 A Del Barrio Centenario, Destechados, El Futuro, El Portal De Aranda, El Portal Del Norte, El Rincón De Pasto, El Rincón Del Rosario, Juan Pablo II, La Esperanza, La Floresta, Libertad, Loma Del Carmen (Marquetalia), Marquetalia, Niño Jesús De Praga, Nueva Aranda, Nuevo Horizonte, Nuevo Sol, Ocho De Marzo, Prados	
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DIVISION	CONSTITUTED BY
	Del Norte, Quebrada Gallinacera 2da Parte, Quillotoco, Rincón De Aranda, Rio Blanco, Rio Blanco Que Termina Ojo De Agua, San Albano, Santa Matilde, Sector Pedagógico Avenida Oriental, Sol De Oriente, Termina Sector Peatonal 28, Tescual, Villa Del Rosario, Villa Guerrero - Villas Del Norte.
<b>Community 11</b>	Villa Elena, Salsipuedes, Rincón Del Paraíso, Los Alcázares, La Lomita, La Floresta, Hospital Civil, El Corralito, El Común, El Calvario, Corazón De Jesús, Ciudad Real, Chico, Centenario, Belalcázar, Aquine, Reservado, Aquine IV, Aquine III, Aquine II, Aquine I, Aquine Alto, Alameda II, Alameda.
<b>Community 12</b>	Villa Ángela, Villa Rocío, Villa Recreo, Villa del Prado, Villa Colombia, Villa Adriana María, Sindagua, Simón Bolívar, SENA, San Mateo, San Diego Norte, Parque De Baviera, Monserrat, María Paz II, María Paz, Las Orquídeas, La Josefina, La Florida, La Carolina, Gualcala, Fray Ezequiel Moreno Díaz, El Paraíso, El Manantial, Cujacal Bajo, Carlos Pizarro, Campiña De Oriente, Balcones Del Este, Altos De La Carolina.
<b>RURAL SECTOR</b>	
<b>Township Caldera</b>	of La Caldera, Genoy, Morasurco, Buesaquillo, Cabrera, Mapachico, Obonuco, La Laguna, San Fernando, Gualmatán, Jongovito, Jamondino, Mocondino, El Encano, Catambuco, Santa Bárbara, El Socorro
<b>Township Catambuco</b>	of Municipal capital: Catambuco Centro Village: Catambuco Centro, El Campanero, Bellavista, Botana, La Merced, Botanilla, La Victoria, San Antonio de Agüinea piguyo, Guadalupe, San José de Casanare, San Antonio de Casanare, Chávez, Alto Casanare, San José de Catambuco, Cruz de Amarillo, Santamaría, Cubiján Bajo, Cubijan Alto, Fray Ezequiel, San Isidro,
<b>Township Gualmatán</b>	of Municipal capital: Gualmatán Centro Village: Huertecillas, Nueva Betania, Vocacional, Gualmatán Alto, Gualmatán Centro, Gualmatán bajo y Avenida Fátima



<b>DIVISION</b>	<b>CONSTITUTED BY</b>
<b>Township of Genoy</b>	Municipal capital: Genoy Centro. Village: El Edén, La Cocha, Pullitopamba, Aguapamba, Castillo Loma, Nueva Campiña, Chaguayaco, Bella vista.
<b>Township of Mapachico</b>	Municipal capital, Mapachico Centro. Village: Villa María, El Rosal, Briceño, La Victoria, San Cayetano, San Francisco Briceño, Los Lirios, San Juan De Anganoy y Anganoy
<b>Township of Obonuco</b>	Municipal capital Obonuco Centro. Village: Santander, San Felipe Alto, San Felipe Bajo, San Antonio, Bellavista, La Playa, Mosquera.
<b>Township of Santa Bárbara</b>	Municipal capital Santa Bárbara Centro. Village: Cerotal, Los Ángeles, Las Encinas, Concepción Alto, Concepción Bajo, Las Iglesias, Jurado, La Esperanza, Los Alisales, Divino Niño y Santa Bárbara Alto, San Gabriel, Bajo Casanare, El Carmen
<b>Township of La Laguna</b>	Municipal capital La Laguna Centro. Village: Aguapamba, San Luis, Alto San Pedro, El Barbero y la Playa, San Fernando Alto, San Fernando Bajo, Dolores Centro
<b>Township of Buesaquillo</b>	Municipal capital Buesaquillo Centro. Village: La Alianza, San José, San Francisco, La Huecada, Pejendino Reyes, El Carmelo, Tamboloma, Buesaquillo alto, Cujacal Centro, la josefina, Cujacal san Isidro, Cujacal alto villa julia.
<b>Township of Morasurco</b>	Municipal capital Daza, Village: San Juan Alto, San Juan Bajo, Tosoabi, Chachatoy, Pinasaco, Tescual, San Antonio de Aranda, La Josefina.
<b>Township of La Caldera</b>	Municipal capital Caldera Centro. Village: Alto Caldera, San Antonio, Pradera Bajo, Arrayán Alto, Los Arrayanes, Villa Campiña.
<b>Township of El Encano</b>	Municipal capital: El Encano centro Village: Ramos, Romerillo, Motilón, Carrizo, Casapamba, El Socorro, Bellavista, El Puerto, San José, Campo Alegre, Santa Clara, Santa Rosa, Mojondinoy, Naranjal, El Estero, Santa Isabel, Santa Teresita y Santa Lucía.
<b>Township of Cabrera</b>	Municipal capital: Cabrera Centro. Village: Buenavista, Duarte, La Paz y El Purgatorio.
<b>Township of San</b>	Municipal capital: San Fernando Centro Village of: Dolores

DIVISION		CONSTITUTED BY
<b>Fernando</b>		Retén, El Común, Alto San Fernando, La Cadena, Camino Real y Caracolito
<b>Township Mocondino</b>	<b>of</b>	Municipal capital: Mocondino centro Village: Canchala, Puerres, Mocondino y Dolores.
<b>Township Jamondino</b>	<b>of</b>	Municipal capital: Jamondino Centro Village: El Rosario, Santa Helena y Jamondino.
<b>Township Jongovito</b>	<b>of</b>	Municipal capital: Jongovito centro Village: Jongovito Centro, Chuquimarca, Cruz Loma, Josefina, Armenia, San Pedro, San Francisco
<b>Township Socorro</b>	<b>of El</b>	Municipal capital: El Socorro Centro Village: El Carmen, san Gabriel y Bajo Casanare.

Source (Géminis Consultores Ambientales S.A.S., 2016, 2016).

#### Municipal Organization

The Mayor's Office is the branch of the executive branch of the Municipality, which rests on the Mayor of Pasto who has a four-year cycle, working together with the Council, which is the administrative power body. (Alcaldía Municipio de Pasto, 2016)

The organizational structure of The Municipality of Pasto, was recently classified in first category, it presents a hierarchical order, which is linked in the different administrative units, based on the principle of a control unit. The higher structure shows a mixed structure between the hierarchical and functional but with a clear separation of divisions where the line of authority and responsibility links the operating units.

#### Political Tendency

In the Municipality of Pasto, according to the information from the National Civil Registry, regarding the results of the mayoral elections on October 25, 2015, Movimiento Ciudadano por Pasto obtained 73.60% of the valid votes, a very significant difference related to the rest of the parties that postulated, such as Cambio Radical, Centro Democrático, Unión Patriótica and Opción Ciudadana. However, it is necessary to consider that the victory of Movimiento Ciudadano por Pasto is related to pacts with leaders of traditional parties, and, also to the support of some divergent parties, as well as minority parties and movements.

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In relation to elections for the Municipal Council, nineteen seats were elected in the Municipality of Pasto, presenting a preference for El Partido de la U, Cambio Radical and Movimiento Indígena Social - MAIS, with three seats each. Followed by the traditional parties Liberal and Conservador with two seats each followed by the parties Opción Ciudadana, Alianza Social Independiente - ASI, Centro Democrático, Movimiento Autoridades Indígenas de Colombia - AICO, Verde, Polo with a seat each.

The Municipality of Pasto has Local Management Boards, in its different townships and small communities, which were renewed on October 25, 2015 in the territorial elections, where the party Cambio Radical got the largest number of seats, followed by Partido de la U with twenty-one seats and Partido Liberal with nineteen seats. Also, Polo Democrático Alternativo and Partido Liberal with nine seats each, followed by Partido Verde with six seats and the parties Centro Democrático and Movimiento Autoridades Indígenas de Colombia with two seats respectively.

The participation of community leaders from the Municipality of Pasto, is related to management development in their communes and/or townships, through the Community Action Councils, seeking the benefit for their communities in the territories.

#### Minor territorial units

Table 0.2 presents minor territorial units of the Municipality of Pasto, which are part of the influence area of Rumichaca - Pasto road project, as well as their limits.

Table 0.48 Minor Territorial Units part of the Influence Area for the Project, belonging to the Municipality of Pasto

TERRITORIAL UNITS	LIMITS
<b>GUALMATÁN ALTO</b>	To the north with township Mapachico To the south with Village Vocacional and La Palizada To the east with Villages La Playa, San Antonio, Nueva Betania To the west with Village Marqueza Alto
<b>VOCACIONAL</b>	To the north with Village Gualmatán Centro To the south with Village Cubijan Alto To the east with Village La Merced To the west with Village La Palizada

<b>CUBIJAN BAJO</b>	To the north with Cubijan Alto To the south with el Municipality of Tangua To the east with Village Cubijan Alto To the west with La palizada
<b>CUBIJAN ALTO</b>	To the north with Village Vocacional To the south with Village Cruz de Amarillo To the east with Village La Merced To the west with La Palizada
<b>LA MERCED</b>	To the north with Village Huertecillas and Catambuco To the south with Village Cruz de Amarillo To the east with Village San José de Catambuco To the west with Village Cubijan Alto
<b>SAN JOSE DE CATAMBUCO</b>	To the north with Village Botanilla To the south with Village La Merced To the east with Village Botana y Guadalupe To the west with Village La Merced
<b>CATAMBUCO</b>	To the north with Village José Fina To the south with Village La Merced To the east with Villages Fray Ezequiel and Botanilla To the west with Village Huertecillas
<b>HUERTECILLAS</b>	To the north with Villages San Antonio and Mosquera To the south with Village La Merced To the east with Village Cruz Loma and Josefina To the west with Village Fátima

Source (Alcaldía Municipio de Pasto, 2016)

### 5.3.7.2 Organizations presence and community organization

The following are different institutions present around the area of influence or had a relevant impact on this component, where the municipal components stand out, then those related to the departmental order, while the national ones are scarce and international are none.

#### Functional unit 4

#### Municipality of Imués

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## Institutions and organizations

Institutions for management, administration, control and those related to actions aimed at efficiency and effectiveness for the provision of services, are recognized by inhabitants; This way, their influence can be recognized in the population from the Municipal Legal Representative Office and the Family Commissariats, since their work is directed permanently to the fulfillment of the fundamental rights. Thus, the Municipal Legal Representative Office is identified as an instance that must clearly know the Rumichaca Pasto road project, to solve different situations within the framework of the project, which makes the Municipal Legal Representative Office one of the key actors for the different socialization meetings of the project.

Preventive health programs are carried out by the State Owned Social Welfare Enterprise Santiago Apóstol de Imués, which is a first level Service Rendering Institution, registered in the health system since May 3, 2007, although it is not yet found accredited. Preventive programs seem to be insufficient for the rural and urban sectors, because although they are a priority for the municipal administration they are affected by the national administration for health. Thus, it should be noted that with the current resources there are basic care services which have facilities and human talent for priority attention, however there is a need for more complex specialties and services.

Regarding the institutional presence from the administration of Justice, it works in proportion to the rest of the country, it faces difficult processes both related to logistics and human talent, making efficiency and effectiveness in services lack of the necessary levels of care. In this sense, the municipal justice administration serves to the extent of the possibilities, the demands of the population and law enforcement, through the National Police which represents the support and presence of the State.

The programs for prevention and care for children and adolescents are under the management of the Colombian Institute for Family Welfare, which is present in the Municipality, which in addition to promoting nutrition and health in minors, seeks to support families in conditions of vulnerability, threat and neglect of fundamental rights.

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About of the education sector, Imués has sixteen pre-school and primary education centers and three secondary educational institutions. Around the influence of El Pedregal - Catambuco segment, there is the Educational Institution Jesus del Gran Poder, located in El Pedregal, which has agricultural technical modality, in the morning and night shifts.

The Department for Social Prosperity (DPS) is present in the Municipality with the flagship program of “more families in action”, among those programs, the following are recognized: families in action, elderly and young people in action. Such programs provide an economic incentive for people in situations of vulnerability or with a SISBEN 1 and 2 levels. In addition, different projects were incorporated, related to a productive nature and income generation. Red Unidos is also present in the Municipality focusing on the population in situation of poverty and extreme poverty, leading them towards the fulfillment of objectives and overcoming poverty.

Table 0.3 shows public organizations present, according to their programs or projects.

Table 0.49. Public Organizations, Municipality of Imués

<b>Organization</b>	<b>Program and/or Project</b>
<b>Mayor’s Office</b>	Public Administration, Execution of the development plan with programs and projects in the different instances.
<b>Municipal Attorney’s Office</b>	Surveillance & Control
<b>Colombian Institute for Family Welfare – ICBF</b>	Prevention and comprehensive protection of early childhood, childhood, adolescence and family welfare.
<b>State Owned Social Welfare Enterprise Santiago Apóstol</b>	Health & Prevention
<b>Municipal Mixed Court 001 of Imués</b>	Justice Administration
<b>Commissariat of Families</b>	Comprehensive protection of families
<b>Police inspectorate</b>	Law enforcement
<b>National Police</b>	Law enforcement
<b>Agricultural Education Organization Santa Ana</b>	Education

Organization	Program and/or Project
Education Organization Jesús del Gran Poder	Education
Education Organization María Luz	Education
Nariño Governorate	Department Administration.

Source (Géminis Consultores S.A.S, 2016)

In conclusion, it is possible to state that the organizations present in the Municipality do not offer services to the community related to solve basic needs or the fulfillment of fundamental rights, nevertheless it is emphasized the need for improvements to generate greater efficiency and effectiveness of those processes. On the other hand, the incidence in the community of the Municipal Attorney's Office and the Commissariat of Families from the Municipality is highlighted.

The Municipal administration does not have an institutional logistic and operational body to mitigate or act during risk events, for the year 2015, no resources were allocated for this purpose.

#### Operation time

Institutions and organizations present in the Municipality offer their services on a permanent basis from the date of their opening.

#### Programs or projects executed, or under execution in the Municipality of Imués

According to the information provided by the Government of Nariño, the following projects are registered for the Municipality of Imués during the last three years, as shown below.

Table 0.50 Programs or projects executed or under execution in the Municipality of Imués

PROGRAM OR PROJECT	OR SECTOR	SPONSOR OR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
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<b>Replacement of the terrestrial ambulance for basic care transport of the health center Santiago Apóstol, Imués.</b>	Health	Health Center Santiago Apóstol	Health Center Santiago Apóstol	15/10/2015	Departmental Health Institute of Nariño	Municipality Inhabitants
<b>Strengthening food sovereignty through the Chagra model for 160 indigenous families of the Imués Faction in the indigenous Town Council in the Túquerres Reserve.</b>	Agricultural Sector	Indigenous Town Council of Túquerres Reserve	Governorate of Nariño	17/02/2014	Secretariat of Agriculture and Environment of the Department	Families from the Faction of Imués, Túquerres Reserve
<b>Construction of an auditorium in the Santa Ana Agricultural Educational Institution, Township of Neira Santa Ana - Imués.</b>	Education	Santa Ana Agricultural Educational Institution	Santa Ana Agricultural Educational Institution	08/11/2013	Departmental Infrastructure & Mines Secretariat	Township of Santa Ana inhabitants
<b>Increase of production volumes with diversified products with the agricultural collective Tablón de Imués.</b>	Agricultural Sector	Agricultural Collective El Tablón De Imués	Agricultural Collective El Tablón De Imués	20/09/2013	Departmental Secretariat of Agriculture and Environment	Village el Tablón inhabitants



<b>Optimization of sanitary sewerage Pedregal sector.</b>	Drinking water and basic sanitation	Mayor's Office	Mayor's Office	11/07/2013	Departmental Infrastructure & Mines Secretariat	Pedregal inhabitants
<b>Construction of drinking water treatment plant Municipal capital of Imués</b>	Aqueduct	Mayor's Office	Governorate of Nariño	22/05/2013	Subsecretariat of Regional Economy and Drinking water	Municipal capital inhabitants

Source (Gobernación de Nariño, 2016)

It should be noted that for the minor territorial unit El Pedregal is part of the area of socioeconomic influence of the project, during the project developed in 2013, regarding the optimization of sanitary sewerage.

#### Grantee population

The grantee population from the different projects implemented and those still in execution, has been the general population, particularly the vulnerable population such as children and adolescents, pregnant women, the elderly and people living in poverty. and extreme poverty.

#### Institutional capacity

The Municipality of Imués is an entity that depends on the economic resources derived from the general system of participation, the health sector, the surcharge on gasoline and property tax, however these economic and financial resources do not satisfy the recurring needs and problems in the Municipality. (Imues, Alcaldía municipal, 2012)

Currently the Municipality has administrative weaknesses due to lack of information and databases in the project banks part of the main secretariats such as finance, planning, local health management, community development, SISBEN, among others. (Municipal Development Plan 2016 - 2019); the above affects development, reducing the capacity of management in the Municipality, appropriate decision-making and citizen service, as well as weaknesses in the implementation and development of public policies that seek the transformation in the territories to offer better life conditions. In relation to this situation and to achieve institutional strengthening, it is proposed to make educational and training meetings for the office of good government, and in addition, there is the program "Municipal administrative center with quality human talent at the service of all", which seeks to strengthen the training of officials and strengthening the communication in the entity and the information system. Other objectives seek to carry out participatory and community planning, accountability, update the manual and public management procedures, in order to implement a good governance policy to improve citizens' confidence in the institution (Imués, Alcaldía Municipal, 2012)

The Municipality includes institutional strengthening through objectives such as: office of good governance education, human talent training and information and communication system strengthening, community participation and planning, updating of the manual of procedures and public management, and implementation of the policy of good government to improve the confidence of the citizenship towards state organizations.

In this sense, the institutional capacity of the Municipality of Imués regarding management and projects execution, has focused the attention of the municipal and departmental administration, on some needs related to the population, with the implementation of programs and/or community benefit projects included in development plans in basic sanitation, health, education, drinking water and agricultural sectors, however it is clear, according to the above, that improvements are required to establish a proper institutional capacity consistent with the population served. Thus, despite having positive aspects, the Municipality does not have an economic and financial capacity for unexpected events that may take place during the execution of the project, for that reason it is necessary to create contingency plans that allow institutional management. On the other hand, according to the information provided by the community leaders in the village sheet, health service is deficient in the

Municipality of Imués, for that reason, the population must go to other municipalities, which does not favor the capacity to respond to an eventuality like a serious accident for example.

#### Participation mechanisms and organizations

The participation of the inhabitants from this large territorial unit is presented in a constant way in different scenarios for dialogue, debate, exchange of knowledges and the incidence in public policies, in that sense contexts are favored by the Territorial Planning Council, the Municipal Board of Women, the Development and Control of Public Utilities Committee, the Municipal Committee for Disaster Prevention - CLOPAD, the Municipal Council of Social policy, the Environmental Education Committee, the Transitional Justice Committee, the Municipal Council of Culture, the Senior Citizens Committee, the Displaced Population Care Committee, the Association of Health Users, the Association of Users of Water, Sewer and Sanitation Services - ASUASPIM and the Association of Villages Aqueduct Services users Silamag -Bellavista Alto -La Loma and Paredón -ASOALMALOPA.

Likewise, the participation of the community in areas of political construction at a local level, promoted by the municipal council and the Mayor's office is recognized, as well as at the departmental and national levels through the exercise of the popular vote for the election of the Assembly, the Chamber of Representatives, the Congress and the Presidency of the Republic. It should be noted that the popular vote becomes the most common mechanism of participation, although the 1991 Political Constitution establishes other participation mechanisms, which have not yet been used by this community, to make participation more effective at the level of a collective construction to fully determine the decision making in the pursuit of a better quality of life.

On the other hand, minor territorial units seek their participation in spaces for permanent encounter which promote dialogue and collective construction towards common objectives, directed by a leader and a work team that constitute the Community Action Council, elected by popular vote, the last two are legally constituted by their condition in the territory since 1965 as is the case of the Central Board, the first to be organized through its constitution. The last to be formed are the councils of Villages Imbued and Pescadillo, their constitution dates back to 1991.

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Table 0.5 indicates the different spaces for civic and community participation in the Municipality of Imués, where Community Action Councils, civil defense, associations, among others are recognized.

Table 0.51 Civic & Community Participation Spaces of the Municipality of Imués.

NAME	LOCATION	INCORPORATION DATE
<b>Community Action Councils</b>	Village from the Municipality of Imués.	Between 1965 & 1991
<b>Civil Defense</b>	Village of Pilcuan	00/00/1980
<b>Santiago Association - Community Mothers</b>	Municipal capital	Not registered
<b>María Luz Association - Community Mothers</b>	Santa Ana	Not registered
<b>EMSSANAR Users association</b>	Municipal capital	Not registered
<b>Mallamas Users Association</b>	Municipal capital	Not registered
<b>Aqueduct, sewage and sanitation of the urban areas utilities administrator association ASUASPIM</b>	Municipal capital	01/May/2009
<b>Comfamiliar Users Association</b>	Municipal capital	Not registered
<b>Creando Horizontes Association ASCOHOR</b>	Chirristes	00/Dec/2007

Source (Géminis Consultores S.A.S, 2016)

Consistency, community organizations of minor territorial units of this Municipality, are the Community Action Councils, a legal form that acquires significant importance in the area. In the minor territorial unit comprising the area of socio-economic influence of the Municipality of Imués, El Pedregal, which has as a relevant authority of community participation the Community Action Council, together with the existing Administrative Board of the Aqueduct. It is outstanding that an inhabitant of Pedregal is the current Mayor of the Municipality of Iles and two more inhabitants are officials of the Mayor's Office. Pedregal has the Educational Organization Jesus del Gran Poder that also counts

with the Parents Meeting. In addition, there are two Community Homes, Table 0.6 Data are presented from the Community Action Council of El Pedregal.

Table 0.52. Community Action Councils in the Project's area of influence.

Belongs to	Incorporation by a Legal Entity		Communal Action Council President Name
<b>Pilcuán, Pilcuán Viejo sector</b>	215	03/09/1965	Jorge Lombana
<b>Pilcuán, La Recta sector</b>	1	08/06/1981	Milton Mauro Quiscualtud
<b>El Pedregal</b>	822	15/12/1964	Luis Alberto Narváez

Source (Gobernación de Nariño, 2016)

It should be noted that the Municipality of Imués is located in a strategic point for the development of economic activities such as tourism and trade, since this Municipality makes easy the relationship between the Municipalities located south, such as Ipiales, the neighboring country of Ecuador and the area of the coast, which makes it a meeting point between the different regions of the Department, consistently in the Municipality productive associations dedicated to the exploitation of agricultural, forestry and livestock activities are recognized, such organizations are shown in Table 0.7; In the area of influence of the Project two associations located in El Pedregal are identified.

Table 0.53 Municipality of Imués Productive Organizations Table

LOCATIONS & GRANTEES	ORGANIZATION NAME	ACTIVITY	INCORPORATION
<b>San Isidro</b>	Agricultural Association Nuevo Horizonte	Productive Projects	Not registered
<b>Pilcuán</b>	Agricultural Association Progreso del Futuro de Imués	Agricultural production & education	14/Dec/2000
<b>Imués</b>	Fique Producers & Craftsmen Association	Productive Projects	Not registered

LOCATIONS & GRANTEES	ORGANIZATION NAME	ACTIVITY	INCORPORATION
<b>Cuarchud</b>	Cuarchud Agricultural Producers	Productive Projects	04/Jun./2003
<b>Imués</b>	Agricultural Association María Luz	Productive Projects	21/Oct./2000
<b>Santa Ana</b>	Association Nueva Integración Santa Ana	Productive Projects	28/Nov./2002
<b>Bella Vista</b>	Agricultural Association Bella Vista	Productive Projects	Not registered
<b>Santa Rosa</b>	Lake Maintenance Association ASPROLAGO	Productive Projects	02/May/2008
<b>Santa Rosa</b>	Agricultural Association Mothers heads of household	Agroindustrial & Productive Projects	01/Mar/2007
<b>Santa Rosa</b>	Work Association Corporation for the Production & Trade of Minor Species	Productive Projects	17/Jan/1997
<b>San Isidro</b>	Agricultural Producers Association of San Isidro	Productive Projects	23/11/1998
<b>Pilcuan La Recta</b>	Farmer Producers Association of Imués	Productive Projects	14/12/2000
<b>Pedregal</b>	Pig farmers Association El Pedregal ASPODE	Productive Projects	Not registered
<b>Pedregal</b>	Natural Reserve Guayacanes del Llano Verde affiliated to the Network of Natural Reserves of the Civil Society – RESNATUR.	Nature preservation projects	Not registered

Source (Imués, Alcaldía Municipal, 2012)

Finally, it is clarified that the instances and mechanisms of participation demonstrate the inhabitants of the Municipality level of empowerment, who seek to access to rights as stakeholders and as participants in the different processes that concern the community.

In the Municipality of Imués there is a committee of environmental education in formation, to later articulate activities related to training in environmental issues within the community.

### Municipality of Yacuanquer

#### Institutions and organizations

The Municipality of Yacuanquer has an institutional presence, according to the state programs and/or projects, and the community organization corresponds to the category of the Municipality.

Among the institutions present in the Municipality is the Welfare Institute, which develops the implementation of the Public Policy for Early Childhood, Childhood and Adolescence, which was approved by agreement from December 26, 2013, constituting a long-term tool which allows performing actions to be taken for the defense of the rights of children and adolescents.

Regarding the subject of health is the State-Owned Enterprise called: Health Center of Yacuanquer Salud Ya, established since March 21, 2007; which presents with some deficiencies related to the health service, which increases morbidity and mortality factors. Thus, the Municipality has sought to overcome these deficiencies with the development of programs that contribute to the strengthening of the provision of health services.

On the other hand, another institution which in this context has great incidence in the community, is the family commissary that develops processes of human talent, through an interdisciplinary team that contributes to improve the assistance and comprehensive attention to the most vulnerable groups.

As for security, the Metropolitan Police is the authority that exercises its work in the Municipality; which has an electronic surveillance system as well as a community alarms system. It should be noted that the presence of this security agency supports actions for citizen security and healthy coexistence.

Another important institution for the community is the public service company of drinking water and basic sanitation of Yacuanquer, which seeks to improve the coverage and quality of its services, achieving efficiency in the administration and management of such service.

There are also processes led by the Department for Social Prosperity DPS is present in the Municipality with the flagship program of “more families in action”, among those programs, the following are recognized: families in action, elderly and young people in action. Such programs provide an economic incentive for people in situations of vulnerability or with a SISBEN 1 and 2 levels. In addition, they have been incorporating different productive and income generation projects.

Consistency, Red Unidos is an institution present in the Municipality that works with population in situation of poverty and extreme poverty leading them towards the fulfillment of objectives and overcoming poverty.

Within the municipal administration, the Municipal Attorney’s Office’s Office is responsible for ensuring constitutional rights, respect for human rights, conservation of cultural heritage, natural resources, among others. (Yacuanquer A. M., 2015 - 2027)

To guarantee tertiary activities, Yacuanquer has the presence of the Agrarian Bank and the various services that this institution fulfills throughout the national territory, within its policies, aims and goals.

Related to educational organizations, the Municipality has three Educational Institutions:

E.I. Pedro León Torres, which has academic and commercial modality, it is present in the Associated Educational Centers from: Mejía, La Pradera, San Felipe, El Rosario, La Aguada, San José de Córdoba, Taindala, Mohechiza Alto, Moechiza Bajo and Tres Esquinas.



E.I. Concentration of Rural Development, which has an agricultural modality, including Associated Educational Centers from: Inantas Alto, Inantas Bajo, Tasnaque Minda and Tacuaya.

E.I. Chapacual which has academic modality, including Associated Educational Centers: Arguello Alto, Arguello Bajo and Zaragoza.

About the aforementioned institutions, it is necessary to clarify that the quality and coverage of the education service is not optimal, so it is necessary to strengthen this service, for that, the current administration has as goal the implementation of the program to train children and adolescents with projection and competencies for life, from an inclusive development approach. (Yacuanquer, 2016).

Table 0.8 shows the institutions present in the Municipality.

Table 0.54. Public Organizations, Municipality of Yacuanquer.

<b>Organization</b>	<b>Program and/or Project</b>
<b>Mayor's Office</b>	Public Administration, Execution of the development plan with programs and projects in the different instances.
<b>Municipal Attorney's Office</b>	Surveillance & Control
<b>Colombian Institute for Family Welfare - ICBF</b>	Prevention and comprehensive protection of early childhood, childhood, adolescence and family welfare.
<b>State Owned Social Welfare Enterprise Health Center Yacuanquer Salud Ya</b>	Health & Prevention
<b>Municipal Mixed Court 001 of Yacuanquer</b>	Justice Administration
<b>Commissariat of Families</b>	Comprehensive protection of families
<b>Police inspectorate</b>	Law enforcement
<b>National Police</b>	Law enforcement
<b>Cedenar</b>	Power Service
<b>Municipal Registry Office</b>	Civil Registry's Office
<b>Public Utilities Company</b>	Public Utilities

<b>Organization</b>	<b>Program and/or Project</b>
<b>Agrarian Bank</b>	Financial Services
<b>E.I. Pedro León Torres</b>	Education services with academic and commercial modalities
<b>E.I. Concentración de Desarrollo Rural.</b>	Education services with agricultural modality.
<b>E.I. Chapacual</b>	Education services with academic modality
<b>Natural Reserve Flora &amp; Fauna Sanctuary Galeras</b>	Agreement No. 13 from 28 January 1985 from INDIRENA approved by Executive Resolution No. 052 from 22 March 1985 by the Ministry of Agriculture.

Source (Géminis Consultores Ambientales S.A.S, 2016)

In conclusion, it is possible to state that the institutions present in the Municipality offer the community, services to cover their basic needs and the fulfillment of the fundamental rights, nevertheless it is emphasized that the public administration identifies the need for improvements in quality, regarding such services, in the case of Health and Education, the existent establish in a clear way, the incidence in community development.

According to the Yacuanquer Development Plan 2016-2019, the Municipality has a Civil Defense and a Fire Department which were created in 2015 as per resolution No 15 of September 2015. These institutions can deal with situations that are derived from the project.

#### Operation time

The institutions present in the Municipality perform their work in a permanent and indefinite way, guaranteeing access to the services commissioned by each of these institutions.

Programs or projects executed or under execution

In the case of programs and projects, the Government of Nariño registers for the Municipality of Yacuanquer, educational, health and sewer development during the last three years, it is worth noting that for minor territorial units belonging to Yacuanquer, there are no current official sources, the information is presented in more detail in Table 0.9.

Table 0.55. Programs or projects executed or under execution in the Municipality of Yacuanquer.

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Acquisition of computers for the Educational Institution Chapacual, Municipality of Yacuanquer, Department of Nariño	Education	Education Organization Chapacual	Education Organization Chapacual	09/11/2011	Departmental Secretariat of Education	Inhabitants of the village Chapacual
Construction and improvement of sanitary units in institution	Education	Municipality of Yacuanquer	Governorate of Nariño	17/12/2012	Infrastructure & Mines Departmental Secretariat	Inhabitants of the Municipality of Yacuanquer

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
schools and educational centers of the Municipality of Yacuanquer						
Combined sewer optimization in the urban center of the Municipality of Yacuanquer, Department of Nariño	Sewage	Mayor's Office of Yacuanquer	Mayor's Office of Yacuanquer	11/02/2013	Regional & Drinking water Economy Sub secretariat	Inhabitants of the Urban Center of the Municipality of Yacuanquer
Replacement of ambulance for care transfer for the State Owned Social Welfare	Health	State Owned Social Welfare Enterprise Health Center Salud Ya	State Owned Social Welfare Enterprise Health Center Salud Ya	07/10/2013	Health Departmental Institute of Nariño	Inhabitants of the Municipality of Yacuanquer

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Enterprise Health Center Salud Ya						
Replacement and acquisition of biomedical equipment for the State Owned Social Welfare Enterprise Health Center Salud Ya in the Municipality of Yacuanquer, Nariño, western	Health	State Owned Social Welfare Enterprise Health Center Salud Ya	State Owned Social Welfare Enterprise Health Center Salud Ya	16/09/2014	Health Departmental Institute of Nariño	Inhabitants of the Municipality of Yacuanquer
Provision of biomedical equipment for the obstetric hospitaliza	Health	State Owned Social Welfare Enterprise Health Center	State Owned Social Welfare Enterprise Health Center	13/01/2015	Health Departmental Institute of Nariño	Inhabitants of the Municipality of Yacuanquer

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Provision of health service of the State Owned Social Welfare Enterprise Health Center Salud Ya		Salud Ya	Salud Ya			
Provision of biomedical equipment for the State Owned Social Welfare Enterprise Health Center Salud Ya Enterprise of Yacuanquer	Sewage	State Owned Social Welfare Enterprise Health Center Salud Ya	State Owned Social Welfare Enterprise Health Center Salud Ya	26/01/2015	Health Departmental Institute of Nariño	Inhabitants of the Municipality of Yacuanquer
Provision of biomedical and	Health	State Owned Social Welfare	Municipality of Yacuanquer	31/08/2015	Health Departmental Institute of	Health Departmental Institute

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
industrial equipment for hospital use for the State Owned Social Welfare Enterprise Health Center Salud Ya Nariño, West		Enterprise Health Center Salud Ya			Nariño	of Nariño

Source ( Gobernación de Nariño, 2016)

Grantee population.

The different projects implemented in the Municipality show real interest for the benefit to the population in general, taking into account the different age groups, the specific needs and the most important problems in the Municipality. It is observed that among the grantee population there are children and adolescents who are currently in a schooling age, as well as grantees from health, sewerage and drinking water services that includes the community in general.

Institutional capacity

The administration of Yacuanquer seeks to promote the development of their own capacities based on territorial and national resources that contribute to a fair, strong

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and healthy society, to a sustainable economy that respects the environmental limits and promotes good governance in the region regarding the responsible use of science and technology. (Mayoralty of Yacuanquer 2016).

One of the objectives of the Municipality to overcome the low receptivity regarding the institutional offer of the population and their low participation is to foster the technical and human leadership capacity, to promote transformation and empowerment processes in the territory, allowing progress focused on local development; including in the institutional dimension, the sectors of community development, security and justice of the institutional sector.

Despite that the Municipality generates a great part of the resources that allocates to fund of various expenditures, there is still the dependence of resources from the central government, mainly from the General System of Contributions, co-financing agreements, resources from national programs and credit resources, which is acceptable in most of the municipalities of the Department and the country, due to the small capacity they have to self-finance; given that Yacuanquer is a small Municipality, an revenue coming from tax and non-tax income that it can receive, are not significant. Including the small fiscal effort that the administration performs in the collection of taxes.

#### Participation mechanisms and organizations

There is a constant participation of the inhabitants of this large territorial unit, in different scenarios, including dialogue, debate, exchange of knowledges and the incidence in the public policies, in this regard, the contexts are favored by the territorial council of planning, the Municipal board of Women, the Local Disaster Prevention Committee - CLOPAD, the Municipal Council of Social Policy and the Environmental Education Committee.

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### Civic and community organizations

The Municipality of Yacuanquer has community organizations, which have emerged both by the will of each community and by the duty to build and be participants in the development processes. The Community Action Councils have been legally established with a legal status in the territory, since 1966, Table 0.10 shows these relation of civic and community organizations, present in the Municipality.

Table 0.56. Community participation spaces. Municipality of Yacuanquer.

Name	Location	Establishment date
<b>Community Action Councils</b>	Rural & Urban Sectors	Between 1966 & 2001
<b>Civil Defense</b>	Municipality of Yacuanquer	1986
<b>Irrigation District Associations</b>	In the villages of Inantas Alto, Inantas Bajo, Zaragoza, Arguello Alto & Arguello Bajo	Not registered
<b>Parents Meeting</b>	Urban & Rural Sectors	Not registered
<b>Andean Farmers Communities Association of Nariño.</b>	Rural Sector	Not registered
<b>Irrigation District Associations</b>	Rural Sector	Not registered

Source (Yacuanquer, Alcaldía Municipal, 2016)

The farmers initiative, allows to analyze the inhabitants' empowerment that intend to strengthen their production processes, diversify production lines and improve their competitiveness, it has created a mechanism for small and medium producers to gain access to the market and obtain better yields, creating associations legally constituted to be able to obtain support, not only financial but also technical and administrative assistance.

According to official information provided by the Mayor of Yacuanquer, there are productive organizations that contribute to the agricultural development and seek to improve the quality of life regarding farmer's economy. In

Table 0.11 shows productive organizations present in the Municipality of Yacuanquer.

Table 0.57. Productive Organizations. Municipality of Yacuanquer.

LOCATION & GRANTEE POPULATION	NAME OF THE ASSOCIATION	ACTIVITY	ESTABLISHMENT
Village of Tacuaya	Asorquidia	Productive environmental projects	1991
Village of Mejía	Association El Gran Porvenir	Productive projects	2014
Village of Chapacual	Farmer communities' association of Nariño Tierrandina	Productive environmental projects	2003
Village of Tasnaque	Asotasnaque	Productive projects	2014
Village of Chapacual	Agricultural Association Chapacual. ASOCHAPACUAL	Productive Projects	2010
Municipality of Yacuanquer	Yacuanquereña Association of agricultural producers for Colombia - ASOYAPAC	Productive projects	Not registered
Village of Chapacual	Agricultural collective of Chapacual COAGROPAL	Productive projects	2010
Village of Taindala	Association Brisas del Taindala	Productive projects	2014
Village of Chapacual	Asoagro	Productive environmental projects	Not registered
San Felipe, El Rosario	Association Renacer Andino	Productive projects	Not registered
Minda	Guinea pig producers association group	Productive projects	Not registered

LOCATION & GRANTEE POPULATION	NAME OF THE ASSOCIATION	ACTIVITY	ESTABLISHMENT
	Guinea pig		
<b>San Felipe</b>	Association Biotelpis	Productive projects	Not registered
<b>Chapacual</b>	Agricultural Association Buena Esperanza	Productive projects	Not registered
<b>Yacuanquer</b>	Agro - Ecological Association Nuevas Raíces	Productive projects	Not registered
<b>La aguada</b>	Association La Aguada	Productive projects	Not registered
<b>Moechiza Alto</b>	Agro - Ecological Association Nuevas raíces	Productive projects	Not registered

Source (Géminis Consultores Ambientales S.A.S, 2016)

These types of organizations are not registered specifically in the minor territorial units, in the area of influence in Pedregal - Catambuco segment of the Road Project Rumichaca Pasto.

For minor territorial units, the community organization is represented by the Community Action Councils, as indicated in Table 0.12.

Table 0.58. Community Action Councils in the Project's area of influence

Location	Incorporation by a Legal Entity	Communal Action Council President Name
<b>Inantas Bajo</b>	639 08/08/1974	Idelfonso Tobar Pérez
<b>Inantas Alto</b>	194 02/09/1994	Miller Caez Popayán

Source (Gobernación de Nariño, 2016)

According to the existing organization in the minor territorial units of the area of influence Pedregal - Catambuco segment of the Road Project Rumichaca - Pasto -, the following can be found:

Village of Inantas Bajo: The relevant authority of community participation is the Community Action Council, there is also the Administrative Board of the Aqueduct. The Village of Inantas has the Bajo Educational Center in which a Parent Meeting is organized.

Village of Inantas Alto: The relevant authority of community participation is the Community Action Council, there is also the Administrative Board of the Aqueduct. The Village of Inantas Alto has the Educational Center in which a Parent Meeting is organized.

The Municipality of Yacuanquer is located in an area of great importance that allows it to be in contact with neighboring municipalities, especially with the capital of the Department. It has the presence of public organizations mainly, that seek to benefit the general population with access to different services, and the recovery of the fundamental rights such as health, education, housing, water, among others.

Like other municipalities, Yacuanquer does not have its own resources in case of possible setbacks or emergencies, its resources are limited to the General System of Contributions, for that reason the Municipality seeks to implement management strategies to increase institutional capacity.

The community participation has increased over time, initially conforming the Community Action Councils and subsequently different associations and collectives focused on productive and environmental projects.

## Municipality of Tangua

### Institutions and organizations

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According to the Tangua Territorial Planning Plan, institutional political development is related to the appropriateness of the rules related to the economic and social changes taking place in a given territory and with changes in the positions of influence and power originated both by the emergence of new social groups grouped in political movements and by the new relations of interests that are structured in organizations. (Tangua A. M., 2011)

The Municipality of Tangua was classified in sixth category according to the law 17 of the year 2000, it is characterized by the presence of public institutions that provide opportunities for service to the community, among which are highlighted: The Colombian Institute of Family Welfare ICBF, which offers food programs for schools, community welfare homes, among others, it also provides assistance to children and adolescents.

The State – Owned Social Enterprise Hermes Andrade Mejía is located in El Carmen neighborhood in the municipal capital, established according to Special Registry of Health Providers, signed on March 5, 2007, it offers first level services in general medicine, dentistry, clinical laboratory, emergency room, patient transportation and prevention and promotion programs, allowing access to all users of the Municipality. (Alcaldía Municipio de Tangua - Nariño, 2016)

The police provide justice and security to the population, at the moment it works to reduce the scourge of consumption of psychoactive substances, associated to young people still at school, to offer protection and good and healthy coexistence to the young people.

The Commissariat for family fulfills its missionary objectives, framed in Act 1098 of 2006, guaranteeing, protecting, restoring and repairing the rights of the family, due to situations of domestic violence.

As for educational establishments in the Municipality of Tangua, there are six educational institutions that have their own Associated Educational Centers. The Educational Organization Alberto Quijano Guerrero located on the Pan-American Highway in Tambor Village, the José María Navarrete Educational Organization located in the center of the village of Santander, the Buena Esperanza Educational Organization

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located in the district of the same name, Misael Pastrana Borrero Educational Organization Located in Bolivar neighborhood, Nuestra Señora del Carmen Educational Organization located in the village of Cebadal Alto and Pio XII Educational Organization located in Los Andes neighborhood of the municipal capital (Alcaldía Municipio de Tangua - Nariño, 2016)

There are also processes led by the Department for Social Prosperity DPS is present in the Municipality with the flagship program of “more families in action”, among those programs, the following are recognized: families in action, elderly and young people in action. Such programs provide an economic incentive for people in situations of vulnerability or with a SISBEN 1 and 2 levels.

In addition, they have been incorporating different productive and income generation projects. Red Unidos is also has a presence in the Municipality focusing on the population in a situation of poverty and extreme poverty towards the achievement of objectives and overcoming poverty.

Table 0.13 show public institutions present in the Municipality of Tangua.

Table 0.59. Public sector Institution Presence in the Municipality of Tangua.

<b>Organization</b>	<b>Program and/or Project</b>
<b>Mayor’s Office</b>	Public Administration, Execution of the development plan with programs and projects in the different instances.
<b>Municipal Attorney’s Office</b>	Surveillance & Control
<b>Colombian Institute for Family Welfare – ICBF</b>	Assistance to families & adolescence. Program of food for schools
<b>State Owned Social Welfare Enterprise Tangua Salud, Hermes Andrade Mejía,</b>	Health & Prevention
<b>Municipal Mixed Court 001 of Tangua.</b>	Justice Administration
<b>Commissariat of Families</b>	Comprehensive protection of families
<b>Police inspectorate</b>	Law enforcement, support to the schools of parents in the E.I.

<b>Organization</b>	<b>Program and/or Project</b>
<b>National Police</b>	Law enforcement
<b>Department for the National Prosperity</b>	Families in action, Seniors.
<b>Misael Pastrana Borrero E.I.</b>	Education
<b>José María Navarrete E.I.</b>	Education
<b>Alberto Quijano Guerreo E.I.</b>	Education.
<b>Corponariño - Natural Reserve Paramo de las Ovejas</b>	Nature Preservation
<b>Natural Reserve Galeras Sanctuary of Fauna &amp; Flora</b>	Agreement No. 13 from January 28, 1985 from INDERENA and approved by executive resolution No. 052 March 22, 1985, by The Ministry of Agriculture.

Source (Géminis Consultores Ambientales S.A.S, 2016)

In conclusion, it is possible to state that the institutions present in the Municipality allow the community to access services to supply their basic needs and the fulfillment of their fundamental rights, nevertheless it is emphasized that there is not enough acceptance from the community, for that reason one of the approaches of the public administration is to motivate community participation in municipal processes, service assistance, and leadership promotion for community development.

#### Operation time

The institutions present in the Municipality perform their work in a permanent and indefinite manner in the Municipality, guaranteeing access to the services commissioned by each of these institutions.

#### Programs or projects executed or under execution

The Municipality of Tangua recognizes the presence of different projects that carry out actions in favor of the community, Table 0.14, show projects registered by the Governorate of Nariño.



Table 0.60. Programs or projects executed or under execution in the Municipality of Tangua.

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Enlargement of administrative headquarters and completion of Auditorium in the Hermes Andrade Mejía health center, Municipality of Tangua.	Health	State Owned Social Welfare Enterprise Health Center Hermes Andrade Mejía	State Owned Social Welfare Enterprise Health Center Hermes Andrade Mejía	09/10/2012	Health Departmental Institute of Nariño	Inhabitants of the Municipality of Tangua.
Construction of multifunctional court for the Village of Marqueza Baja, Municipality of Tangua Nariño.	Sports, entertainment and taking advantage of free time	Community Action Council of Village of Marqueza Baja	Department of Nariño	22/05/2013	Departmental Secretariat of Infrastructure & Mines	Inhabitants of the Village of Marqueza Baja
Construction of multiple use auditorium of the educational	Education	Municipality of Tangua	Municipality of Tangua	27/06/2013	Departmental Secretariat of Infrastructure & Mines	Inhabitants of the Municipality of Tangua.

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
institution El Carmen, Municipality of Tangua.						
Optimization and enlargement of sanitary sewage in the Village of La Buena Esperanza of the Municipality of Tangua	Drinking water and basic sanitation	Mayor's Office of Tangua	Mayor's Office of Tangua	27/09/2013	Departmental Secretariat of Infrastructure & Mines	Inhabitants of the de la Village of la Buena Esperanza.
Strengthening of the agricultural sector as a Competitiveness strategy in the Municipality of Tangua.	Agricultural sector	Mayor's Office of Tangua	Mayor's Office of Tangua	06/11/2013	Departmental Secretariat of Agriculture & Environment	Inhabitants of the Municipality of Tangua.
Multifunctional court construction for the Educational Center of the Village of	Education	Education Institution Marqueza baja	Governorate of Nariño	06/11/2013	Departmental Secretariat of Infrastructure & Mines	Inhabitants of the de la Village of la Marqueza Baja.

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Marqueza Baja Tangua, Nariño, west.						
Improvement and Optimization of the Sewer and rainfall system in streets 1 and 2, and streets 2 and 3 in Village Santander Municipality of Tangua.	Drinking water and basic sanitation	Mayor's Office	Mayor's Office	07/11/2013	Sub secretariat of Regional Economy & Drinking Water	Inhabitants of the Municipality of Tangua.
Optimization of the aqueduct system for the Village Ajos, Tambor, Cebadal and Buena Esperanza Municipality of Tangua.	Aqueduct	Mayor's Office	Mayor's Office	07/11/2013	Sub secretariat of Regional Economy & Drinking Water	Inhabitants of the Village Ajos, Tambor, Cebadal y Buena Esperanza.

Source ( Gobernación de Nariño, 2016)

With that in mind, during the last three years, in the Municipality of Tangua, different projects have been developed benefiting the inhabitants of the minor territorial units of

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the area of influence belonging to the Municipality such as: Ajos, Tambor, Buena Esperanza and Marqueza Baja, in the aspects of aqueduct, drinking water, basic sanitation, education, sports, recreation and use of free time, health and the agricultural sector.

#### Grantee population.

The different projects implemented in the Municipality show that the interest is, and has been to benefit the population in general, taking into account the different age groups and the needs and problems of greater relevance in the Municipality. It can be observed that the grantee population are children and adolescents who correspond to the schooling age, in the aspects of health and education, it has benefited the community in general. In the minor units of El Pedregal - Catambuco segment of the Road Project Rumichaca - Pasto no projects are currently registered.

#### Institutional capacity

The Municipality of Tangua takes into account the institutional strengthening aimed to improve administrative management with transparency, in order to make a offer a better and comprehensive performance, it also includes the creation of the secretary of finance, the improvement of its administrative capacity, updating and implementing the manual of the standard internal control model implementation (MECI); It also proposes to carry out education activities for public officers and representatives of the Community Action Councils.

The financial strategy proposed by Tangua seeks to strengthen the Municipality's main income, reducing its dependence on the General System of Contributions, in order to co-finance their projects. It also supports the strategy for fiscal strengthening, which seeks to strengthen the austerity of operating expenses. These strategies are projected for the government period 2016 - 2019, for that reason, at the moment it does not have any available resources for any eventuality. (Alcaldia Municipal de Tangua, 2016).

#### Participation mechanisms and organizations

Community participation takes place in some areas established by the law, scenarios where participation in administrative decisions is sought. These include: The City

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Council, The Territorial Planning Council, The Municipal Board of Women, The Municipal Committee for Disaster Prevention - CLOPAD, The Municipal Council of Social Policy, The Environmental Education Committee, The Transitional Justice Committee, The Municipal Council of Culture, The Senior Citizen Committee, The Association of Health Users, The Certification Committee for the Program Families in Action, The Municipal Council of Social Security for Health, The Community Committee of Epidemiological Surveillance, The State-Owned Social Welfare Enterprise Board of Directors, The Association of Administrators of the Aqueduct for Villages Cebadal and Nueva Esperanza, The Aqueduct of Village Tambor and Marqueza Baja, The Association of Farmer Users.

The democratic participation of civil organizations such as the one of the Observers board, is present through the different groups and committees organized from the citizen initiative, around control and monitoring related to the management of the public entities in the Municipality.

The Community Action Councils of the Villages El Tambor, El Vergel, San Pedro Obraje, El Cebadal and Cocha verde work on projects for the interest of the community that are included in the Tangua Development Plan 2016 -2019: In El Tambor and la Palizada, the optimization of the aqueduct, in el Vergel projects of milk processing and ecotourism, in San Pedro Obraje, the improvement of the educational center of the village and in Cocha Verde the improvement of the chapel, the community hall and sports center construction.

According to initial information provided by the Mayor of Tangua, the Municipality has Productive Associations that contribute to local economic development. The following is a list of the productive organizations of the Municipality of Tangua.

Table 0.61. Productive Organizations. Municipality of Tangua.

LOCATION	NAME OF THE ASSOCIATION	ACTIVITY	ESTABLISHMENT
Village of Los Ajos	Association Sembrando Vida	Productive	03/Sep/2010
Village of Tapialquer Bajo	Association Asprotangua	Productive	12/Feb/2014
Village of Las	Association Proagrovepal	Productive	14/Nov/2014

LOCATION	NAME OF THE ASSOCIATION	ACTIVITY	ESTABLISHMENT
<b>Palmas</b>			
<b>Village of La Palizada</b>	Association Nuevo Porvenir	Productive	22/Sep/2014
<b>Village of Cebadal</b>	Association Progresar Cebadal Aprocep	Productive	02/Sep/2014
<b>Village of Vergel</b>	Association Users, Campesinos ANUC	Productive	28/Oct/2010
<b>Village of Tapialquer Bajo</b>	Agricultural Association y Ambiental Las Playas	Productive	Not registered
<b>Municipality of Tangua</b>	Association Unión Campesina Tangua	Productive	00/Jul/2014
<b>San Antonio</b>	Association Aprosanantonio	Productive	26/Nov/2013

Source (Tangua, Alcaldía Municipal, 2016)

From the aforementioned organizations, four correspond to the minor units of the area of influence Pedregal - Catambuco segment of the Road Project Rumichaca - Pasto: located in the Villages Los Ajos, Cebadal, Palizada and Vergel.

#### Civic and community organizations

The Municipality of Tangua has community organizations, which have been created both by the will of each community and by the duty to build and be participants in the development processes. The Community Action Councils have been established as legal entities in the territory since 1962, the Councils of Cebadal and Santander were the first to be constituted in that year and the last to be constituted were the Council of the Village Los Arrayanes in the year 2009. Different from the Civil Defense, which was established in the year 2014. The civil organization has also constituted monitoring programs towards public administration through the creation of Citizen observer boards exercising their democratic participation right. In the next Table 0.16 show Community participation spaces.

Table 0.62. Community participation spaces. Municipality of Tangua.

<b>NAME</b>	<b>LOCATION</b>	<b>INCORPORATION DATE</b>
<b>Community Action Councils</b>	Village	1962
<b>Civil Defense</b>	Municipality of Tangua	2014
<b>Citizen observers office</b>	Municipal capital	Not reported

Source (Alcaldía Municipio de Tangua - Nariño, 2016)

Table 0.17 present the Community Action Councils corresponding to the area of influence Pedregal - Catambuco segment of the Rumichaca - Pasto Road Project, the community organization is represented by the Community Action Councils, which have a character that acquires significant importance in the minor territorial unit. In the Municipality of Tangua, according to their area of influence, there are the Community Action Councils of the villages Palizada, Vergel, Marqueza Baja, Tablón Obraje, Chávez, Marqueza Alta, San Pedro Obraje, Los Ajos, Cebadal, Tambor, Páramo, Buena Esperanza, Green and Central Cocha.

Table 0.63. Community Action Councils in the Project's influence area, Municipality of Tangua

Location	Incorporation	by a	Community Action Council President Name
	Legal Entity		
Cocha verde	60	11/08/1983	Segundo Alirio Urbina
El Tablón Obraje	1	05/03/1985	Ángel Antonio Espinoza
San Pedro Obraje	256	05/08/1966	Eduardo Guancha
Corazón de Jesús			Information not registered
Fátima			Not registered información
Bolívar			Information not registered
El Vergel	2691	09/09/1980	Clemente Marino de la Cruz
Buena Esperanza	52	14/05/1991	Harold Rosero
Cebadal	475	19/05/1962	Paulo Hernán Riascos
Chávez	2531	24/09/1979	Esperanza Carvajal
El Tambor	1006	05/10/1962	Nhora Ayala
El Paramo	187	22/03/1978	Harol Rivas Paz
La Palizada	20	01/06/1986	José Alejandro Mejía
Marqueza Bajo	8	16/09/1981	Ramiro Maigual Muñoz
Los Ajos	730	17/09/1974	Janeth Córdoba
Marqueza Alta	610	28/10/1970	Ramón Rosero
Central	440	08/06/1965	José Darío Montilla



Source (Gobernación de Nariño, 2016)

According to the existing organization in the minor territorial units of the area of influence Pedregal - Catambuco segment of the Road Project Rumichaca - Pasto, the following can be found:

Village of Cocha Verde: As sole organization of community participation is the Community Action Council.

Village of El Tablón Obraje: As a relevant organization of community participation is the Community Action Council and the Administrative Board of the Aqueduct. The Village also has the Educational Center Tablón Obraje in which the Parent Meeting is organized, and it also has a Community Home.

San Pedro Obraje: the organizations for participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village of San Pedro Obraje has an Educational Center in which the Parent Meeting is organized. Also, the Village has two Community Homes.

Municipal capital of Tangua: The neighborhoods Corazón de Jesús, Fátima and Bolívar, that belong to the municipal capital center the administration and its different organizations.

Village of El Vergel: As sole organization of community participation is the Community Action Council.

Village of Buena Esperanza: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village has the Educational Center Juan Pablo Segundo in which the Parent Meeting is organized.

Village of El Cebadal: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village has the Educational

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Center Nuestra Señora del Carmen in which the Parent Meeting is organized. There are three Community Homes. There is also a Productive Association called SONALUM.

Village of Chavez: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village has the Educational Center Chavez, in which the Parent Meeting is organized.

Village of El Tambor: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village also has the Educational Center Alberto Quijano Guerrero in which the Parents Meeting is organized. It also has two Community Homes.

Village of El Páramo: As a relevant organization of community participation is the Community Action Council. The Village has the Educational Center El Páramo, where the Parent Meeting is organized.

Village of La Palizada: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village has the Educational Center La Palizada, in which the Parent Meeting is organized. It also has a Community Home.

Village of Marqueza Baja: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village has the Educational Center Sagrado Corazón Marqueza Bajo, in which the Parent Meeting is organized.

Village of Los Ajos: as organizations of participation are the Community Action Council and the Administrative Board of the Aqueduct. The Village has the Educational Center Los Ajos, where the Parent Meeting is organized.

Village of Marqueza Alta: as organizations of participation are the Community Action Council and the Aqueduct Administrative Board. The Village has the Education Center Marqueza Alto, in which the Parent Meeting is organized. In addition, the Estate has a Community Home.

The Municipality counts on the presence of different institutions that offer different services in a permanent and indefinite way, among the institutions present, there are ICBF, DPS, educational institutions and the Health Center, among others, this guarantees access to rights such as health, drinking water, among others.

Within its organization, the Municipality of Tangua guarantees community participation through the implementation of Community Action Councils, Administrative Board of the Aqueduct, Boards of observers, associations and different groups that seek to guarantee access to projects and services that the Municipality has.

#### Functional Unit 5.1

#### The Municipality of Pasto

#### Institutions and organizations

Due to its status as the capital of the Department of Nariño, the Municipality of Pasto has an important participation and presence of governmental and non-governmental institutions, offering various services and promoting access to rights, comprehensive attention and participation in the different processes managed and administered in the city, so the participation of the inhabitants of this major territorial unit is presented in a constant way in different scenarios for dialogue, debate, exchange of knowledge and the incidence in public policies, through the contexts provided by educational institutions, local administration, health institutions, among others, available for the benefit of children, adolescents, young and adults.

As for the educational institutions, Pasto being the Capital of the Department of Nariño, has institutions for both pre-school, primary and secondary education and the different levels of higher education and in the different modalities

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According to the report of the rural educational development plan for the Municipality of Pasto, it is recognized that in Catambuco are located the IEM Nuestra Señora de Guadalupe and its branches, the schools of San José de Botana, the Mixed Rural School of Chavez, the Mixed Rural School Guadalupe and the Mixed rural school of Catambuco. IEM Santa Teresita and its mixed schools of La Merced, Santo Tomas de Equino, CEDIT Santa Teresita, Cubijan Alto and Cubijan Bajo. (Secretaria de Educación Municipal de Pasto, 2011). Regarding the Township of Gualmatán there is the IEM Gualmatán and its branch called Rural Mixed School Jongovito, however, minor units Huertecillas and Vocacional, from the township of Gualmatán part of the of the area of influence Pedregal - Catambuco segment of the Road Project Rumichaca - Pasto, do not have an educational center present.

In relation to health institutions, Pasto has I, II and III levels health institutions, which offer primary and specialized care services. In the township sector of Catambuco and Gualmatán corresponding to the South Network, the Health Center of Catambuco and the Health Center of Gualmatán offer their prevention and promotion services, general medicine, dentistry and pharmaceutical services to the inhabitants of the townships of Catambuco and Gualmatán.

Likewise, the Municipality of Pasto has greater organizations presence, as it can be seen in Table 0.18.

Table 0.64. Organizations Presence. Municipality of Pasto.

Organization	Program and/or Project
Mayor's Office	Public Administration, Execution of the development plan with programs and projects in the different organizations.
Municipal Council	Political Control
Municipal Comptroller's Office	Surveillance & Control
Municipal Attorney's Office's	Surveillance & Control
Municipal Attorney's Office's Office Delegated for the defense of the Consumer	Surveillance & Control
Chamber of Commerce of Pasto	Commercial Registry
Power Plants of Nariño S.A. ESP	Public Utilities

Organization	Program and/or Project
Metropolitan Sanitation Company <b>EMAS</b>	Public Utilities
Energas S.A	Public Utilities
Valuation Institute - INVAP	Valuation
Urban improvement and Housing Institute Inviapasto	Housing
Pasto Sports	Entertainment & Sports
Pasto Salud E.S.E	Health & Prevention
Transport Terminal of Pasto	Public Services
<b>DAS</b>	Security
<b>IDATT</b>	Transit & Transportation
Departmental Hospital, Hospital San Pedro, Children Hospital	Health & Prevention
Boyacá Battalion	Security
SAU	User assistance service
URI – Immediate Reaction Unit	Justice Administration
Red Cross	Aid
National Police	Law enforcement
<b>ICBF</b>	Attention to Children and Adolescents
Department for The Social Prosperity	Assistance, attention, and repair for victims, assistance to vulnerable groups and their social and economic reintegration.
Natural Reserve Flora & Fauna Sanctuary Galeras	Agreement No. 13 from January 28, 1985 from INDERENA and approved by executive resolution No. 052 March 22, 1985, by The Ministry of Agriculture.

Source (Géminis Consultores Ambientales S.A.S, 2016)

In conclusion, it is possible to state that the institutions present in the Municipality offer the community, services to cover their basic needs and the fulfillment of fundamental rights, emphasizing on the number of institutions in relation to the major territorial units in the area of Influence of this project, this way, their influence on communities promote community development.

### Time of operation

In the Municipality of Pasto, current institutions carry out their actions permanently and unlimitedly from the moment they began their work.

### Programs or projects executed or under execution

The Municipality of Pasto has several projects in different sectors, which benefit the general population in the Municipality, and contribute significantly to local development, especially in the area of health, education and agricultural development, among others, as it can be observed in Table 0.19

Table 0.65. Programs or projects executed or under execution in the Municipality of Pasto.

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Technical support for the formulation, socialization and monitoring of the Pasto Development Plan, in its component of the Region	Organizations' Development	Governorate of Nariño	Mayor's Office of Pasto	11/02 /2016	Departmental Secretariat of Urban Planning	Municipality Inhabitants

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
City						
Strengthening of ICTs to improve administrative efficiency in the Governorate of Nariño Pasto, Nariño, West	Organizations' Development	Governorate of Nariño	Governorate of Nariño	14/08/2015	General Departmental Secretariat	Municipality Inhabitants
Extension, remodeling and provision of the local civil hospital of Pasto Salud	Health	Pasto Salud State Owned Social Welfare Enterprise	Pasto Salud State Owned Social Welfare Enterprise	29/12/2015	Health Departmental Institute of Nariño	Municipality Inhabitants
Acquisition of subspecialized ophthalmology equipment for The	Health	Habilitation Center for Children - Cehani-	Habilitation Center for Children - Cehani-	17/11/2015	Health Departmental Institute of Nariño	Grantees of the Center

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Habilitation Center for Children - CEHANI						
Extension, remodeling and provision of the local civil hospital, Pasto Salud, Municipality of Pasto	Health	Pasto Salud State Owned Social Welfare Enterprise	Pasto Salud State Owned Social Welfare Enterprise	30/01/2015	Health Departmental Institute of Nariño	Grantees of the Center
Provision of a Medical ambulance for the ambulatory transport for The Children's Hospital Los Ángeles, Municipality of Pasto	Drinking water and basic sanitation	Children's Hospital Los Ángeles	Children's Hospital Los Ángeles	02/10/2014	Health Departmental Institute of Nariño	Grantees of the Center



PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Structural reinforcement and functional reorganization Phase III, Habilitation Center for Children Cehani ese, Pasto	Health	Habilitation Center for Children CEHANI	Habilitation Center for Children CEHANI	02/10 /2014	Health Departmental Institute of Nariño	Grantees of the Center
Construction and provision of San Vicente health center - Pasto Salud	Health	Pasto Salud State Owned Social Welfare Enterprise	Pasto Salud State Owned Social Welfare Enterprise	19/09 /2014	Health Departmental Institute of Nariño	Grantees of the Center
Construction of the physical infrastructure and replacement of industrial equipment for the	Health	Departmental University Hospital of Nariño State Owned Social Welfare Enterprise	Departmental University Hospital of Nariño State Owned Social Welfare Enterprise	09/09 /2014	Health Departmental Institute of Nariño	Municipality Inhabitants

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
sterilization center of the Departmental University Hospital of Nariño						
Acquisition of Ambulance for Basic Assistance for the Departmental University Hospital of Nariño	Health	Departmental University Hospital of Nariño	Departmental University Hospital of Nariño	19/08/2014	Health Departmental Institute of Nariño	Municipality Inhabitants
Improvement in the provision of health services of first level of complexity in the rural area of the Municipality of Pasto	Health	Pasto Salud State Owned Social Welfare Enterprise	Pasto Salud State Owned Social Welfare Enterprise	28/03/2014	Health Departmental Institute of Nariño	Municipality Inhabitants

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
through mobile units						
Implementation of a Blood Center and improvement of the physical infrastructure and provision of the clinical laboratory in the Departmental University Hospital of Nariño.	Health	Departmental University Hospital of Nariño	Departmental University Hospital of Nariño	10/12/2013	Health Departmental Institute of Nariño	Municipality Inhabitants
Improvement of the access zone and parking in the Municipal Education Institution Ciudad de	Education	Departmental Secretariat of Education of Nariño	Municipal Education Institution Ciudad de Pasto	03/12/2013	Departmental Secretariat of Education	Community of the School

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Pasto from the Municipality of Pasto						
Provision of technological learning tools, furniture and equipment for the Education Organization's Computer Room.	Education	Departmental Secretariat of Education of Nariño	Education Organization Municipal Ciudad de Pasto	03/12/2013	Departmental Secretariat of Education	Municipal Education Organization Ciudad de Pasto
Structural reinforcement and functional reorganization - Phase II - Habilitation Center for Children - Cehani	Health	Habilitation Center for Children - CEHANI	Habilitation Center for Children - CEHANI	06/11/2013	Health Departmental Institute of Nariño	Users, Habilitation Center for Children - CEHANI

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Structural reinforcement and functional reorganization Phase I for the Habilitation Center for Children, Pasto.	Health	Habilitation Center for Children State Owned Social Welfare Enterprise	Habilitation Center for Children State Owned Social Welfare Enterprise	17/10/2013	Health Departmental Institute of Nariño	Users, Habilitation Center for Children - CEHANI
Purchase of medical transport ambulance for the Departmental University Hospital of Nariño.	Health	Departmental University Hospital of Nariño	Departmental University Hospital of Nariño	15/10/2013	Health Departmental Institute of Nariño	Departmental University Hospital of Nariño
Improvement of Estadio Libertad	Sport, recreation and use of free time	Department of Nariño	Department of Nariño	11/09/2013	Departmental Secretariat of Infrastructure & Mines	Department of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Strengthening of Health Services Assurance in the Department of Nariño	Health	Health Departmental Institute of Nariño - IDSN	Health Departmental Institute of Nariño - IDSN	14/08/2013	Health Departmental Institute of Nariño	Health Departmental Institute of Nariño - IDSN
Organizational strengthening within the framework of the formulation and implementation of the life plan of the ROM people settled in Nariño, Pasto, Nariño, West	Community Development	Governorate of Nariño	Governorate of Nariño - Departmental Subsecretariat of Transit & Transportation and Community Development	14/08/2013	Departmental Secretariat of Government	ROM inhabitants

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Comprehensive care in food security, psychosocial accompaniment and effective participation for victims of forced displacement in the municipalities of Túquerres, Ipiales and Pasto in the Department of Nariño.	Displaced population	Governorate of Nariño	Governorate of Nariño	11/02/2014	Departmental Secretariat of Urban Planning	Displacement Victims
Improvement of educational infrastructure and refurbishing of	Education	Governorate of Nariño	Governorate of Nariño	11/02/2013	Departmental Secretariat of Infrastructure & Mines	La Victoria Educational Center

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
furniture in the Educational Center la Victoria, Municipality of Pasto, Nariño.						
Acquisition of a plot for the construction of the Cultural Hall of Mocondino, Municipality of Pasto.	Others	Community Action Council Mocondino Bajo	Mayor's Office of Pasto	18/01/2013	Departmental Secretariat of Urban Planning	Community Action Council Mocondino Bajo
Adequacy and improvement of the mixer and sterile air system of the pharmacy service in the Departmental	Health	Departmental University Hospital of Nariño.	Departmental University Hospital of Nariño.	18/12/2012	Health Departmental Institute of Nariño	Departmental University Hospital of Nariño.



PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
University Hospital of Nariño.						
Physical - functional reorganization for operating rooms Habilitacion Center for Children CEHANI	Health	Habilitacion Center for Children CEHANI	Habilitacion Center for Children CEHANI	10/12 /2012	Health Departmental Institute of Nariño	Habilitacion Center for Children CEHANI
Strengthening culture, customs and habits of the indigenous people of Pastos in the great valley of Aranda, Pasto.	Community Development	Association of Indigenous Authorities of Pastos	Association of Indigenous Authorities of Pastos	06/12 /2012	Departmental Secretariat of Government	Association of Indigenous Authorities of Pastos
Provision of seats for the auditorium	Education	Departmental Secretariat of	University of Nariño	11/10 /2012	Departmental Secretariat of	Liceo Udenar

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
m of the Lyceum of the University of Nariño		Education			Education	
Acquisition of high technology equipment for radiotherapy and radiosurgery services at the Departmental University Hospital of Nariño.	Others	Departmental University Hospital of Nariño.	Departmental University Hospital of Nariño.	13/11/2012	Health Departmental Institute of Nariño	Departmental University Hospital of Nariño.
Implementation of the human milk bank in the Departmental University Hospital of Nariño.	Health	Departmental University Hospital of Nariño.	Departmental University Hospital of Nariño.	24/07/2012	Health Departmental Institute of Nariño	Departmental University Hospital of Nariño.
Adequacy and repair	Culture	Governorate of Nariño	Governorate of	15/06/2012	Departmental	Governorate of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
of the headquarters of the Departmental Music Band located in the Outdoors Theater Agustín Agualongo			Nariño		Secretariat of Infrastructure & Mines	
Construction and relocation of telephone wire networks and structure, from the area of influence of the Round point Las Banderas Road Interchange, Panameric	Transportation	Governorate of Nariño	Governorate of Nariño	11/05 /2012	Office of the Governor	Governorate of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
ana Avenue and 18 Street, in the city of Pasto.						
Acquisition of the 4th floor of the charity building located in street 25 n° 17 - 49 in the city of Pasto, Nariño.	Others	Governorate of Nariño - General Departmental Secretariat	Governorate of Nariño - General Departmental Secretariat	04/05 /2012	General Departmental Secretariat	Governorate of Nariño - General Departmental Secretariat
Provision of Teaching material for the Normal Superior Education Institution, Municipality of Pasto, Nariño.	Education	Normal Superior Education Institution	Normal Superior Education Institution	12/12 /2011	Departmental Secretariat of Education	Normal Superior Education Institution
Acquisition of instrument	Education	Marco Fidel Suárez Education	Marco Fidel Suárez	07/12 /2011	Departmental Secretariat	Marco Fidel Suárez Education Institution

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
ts and uniforms for the Educational Institution Fidel Suárez of the Municipality of Pasto, Nariño.		Institution	Education Institution		of Education	
Improvement of the road Pasto - Jongovito sector Village of San Pedro, Municipality of Pasto Department of Nariño.	Transportation	Governorate of Nariño	Community Action Council San Pedro de Jongovito	02/12/2011	Departmental Secretariat of Infrastructure & Mines	Community Action Council San Pedro de Jongovito
Construction of rigid pavement from street 16 no 10 - 53 in the Village of	Others	Community Council for the Pavement of the street 16 No 10 - 53	Governorate of Nariño	11/11/2011	Departmental Secretariat of Infrastructure & Mines	Community Council for the Pavement of the street 16 No 10 - 53

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
El Rosario Township of Jamondino, Municipality of Pasto, Department of Nariño.						
Strengthening of the production and marketing of organic gooseberry, oriental corridor of the Municipality of Pasto.	Agricultural sector	Fruvinar	Fruvinar	03/11/2011	Departmental Secretariat of Agriculture & Environment	Inhabitants of the West Road of Pasto.
Adaptation of the ecological corridor "the resurrection of the Lord" in the neighborhood	Others	Governorate of the Department of Nariño	Governorate of the Department of Nariño	02/11/2011	Departmental Secretariat of Urban Planning	la Carolina Neighborhood Pasto

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Food in the Municipality of Carolina Pasto.						
Maintenance of an excavator machine brand Komatsu model PC 2203 series 23593 in the Municipality of Pasto.	Transportation	Department of Nariño	Department of Nariño	27/10/2011	General Departmental Secretariat	Municipality of Pasto
Monitoring and characterization of phytophthora infesting populations from potato growing areas in the Department of Nariño.	Agricultural sector	University of Nariño	University of Nariño	19/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Exploitation of used oil from kitchens and restaurants to obtain biodiesel in the Municipality of Pasto.	Agricultural sector	Universidad Cooperativa de Colombia	Universidad Cooperativa de Colombia	07/10/2011	Departmental Secretariat of Agriculture & Environment	Universidad Cooperativa de Colombia
Characterization of resistance genes of solanum	Agricultural sector	University of Nariño	University of Nariño	06/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño
Characterization of genes resistance	Agricultural sector	University of Nariño	University of Nariño	06/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño
Effect of storage conditions	Agricultural sector	University of Nariño	University of Nariño	04/10/2011	Departmental Secretariat of Agriculture	University of Nariño



PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
					e & Environment	
Research for the extraction of antioxidant compounds from the potato peel in the Department of Nariño.	Others	University of Nariño	University of Nariño: Program of Engineering	04/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño
Investigation of the suitability of seven lines of pea (pisum sativum I.) for agroindustry processing in the Department of Nariño.	Agricultural sector	University of Nariño	University of Nariño	04/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
Genetic evaluation, selection and assisted transfer of embryos with mitochondrial DNA markers in milk cattle from the high tropics of Nariño.	Agricultural sector	University of Nariño	University of Nariño	04/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño
Research in the use of solid agroindustry residues of fruits to obtain oils with potential for the cosmetic industry, using the technology of	Others	University of Nariño	University of Nariño: Program of Agroindustry Engineering	04/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
extraction with supercritical fluids in the Department of Nariño.						
Elaboration of a functional drink with natural pulps based on a mixture of milk and regional fruits of cold and warm climate of the Andean zone: tree tomato (solanum betaceum) and cheirimoya (annona cherimoya)	Others	University of Nariño	University of Nariño	04/10 /2011	Departmental Secretariat of Agriculture & Environment	University of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
).						
Evaluation of the production and compositional quality of the milk in times of forage shortage, by the use of silage of Brazilian pasture phalaris sp in specialized farms of the high tropic of Nariño.	Agricultural sector	University of Nariño	University of Nariño	04/10/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño
Design and evaluation of a process for the recovery of whey	Agricultural sector	University of Nariño	University of Nariño	30/09/2011	Departmental Secretariat of Agriculture & Environment	University of Nariño

PROGRAM OR PROJECT	SECTOR	SPONSOR INSTITUTION	EXECUTING INSTITUTION	DATE	SECTOR SECRETARIAT	GRANTEES
components and their use to improve the quality and reduce the environmental impact of the production in the Department of Nariño.					ent	
Improvement of pedestrian zones in La Resurrección Parrish la Carolina neighborhood, Pasto	Others	La Resurrección Parrish	Governorate of Nariño	08/09/2011	Departmental Secretariat of Urban Planning	La Resurrección Parrish

(Gobernación de Nariño, 2016)

Territorial minor units, projects in the area of influence

It is recognized in the projects in the Catambuco and Gualmatán townships, the implementation of a digital live point in the IEM Santa Teresita de Catambuco, construction of a CDI in the Catambuco township, the construction of aqueduct

networks in the village of San Antonio de Catambuco, system of the aqueduct Piedras in the village of Guadalupe (Pasto, Alcaldía municipal, 2016)

Specifically, for the territorial units of the area of influence in Pedregal - Catambuco segment of the Road Project Rumichaca Pasto, that correspond to the Villages of Cubijan Alto and Bajo, San José de Catambuco, La Merced, Catambuco, Gualmatán Alto, Vocacional and Huertecillas, there are no projects for the community benefit registered, performed by the Government entity.

Grantee population.

As for the grantee population from the projects executed, and those are under execution, integrality has been sought, for that reason it can be observed that the grantee population has been the community in general at different levels.

Institutional capacity

The Municipality of Pasto includes the institutional strengthening focused on strengthening the administrative management, in order to improve overall performance. Among the economic and financial resources, the Municipality receives funds from the General System of Royalties, transfers from Fosyga, Coljuegos, transfers for health, transfers for the SETP and mainly from the General System of Contributions.

In accordance with the information from the Mayor's Office in Pasto, in its institutional dimension, it contemplates two strategies known as pacts, the first strategy is related to the Pact for Security, Coexistence and Peace, aligned with the national transversal strategy called Security, Justice and Democracy for the Construction of Peace. Through these programs, this pact seeks to strengthen administrative bodies that guarantee security, coexistence and formal and non-formal justice through preventive, fair and safe actions, in the process of building a healthy coexistence and the development of a public policy for victims and reintegration strategies, as a guarantee for the effective enjoyment of rights, in the framework of a stable and lasting peace. The second strategy refers to the Pact for an Open and Participative Government which is aligned with the transversal strategy of the National Development Plan, called Good Government, through which it seeks to strengthen the culture of participatory public management, positioning the Municipality of Pasto as an open, inclusive and democratic model of

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government that promotes a comprehensive development and the collective construction of peace. Also including the community social strengthening and good governance. It emphasizes the characteristic of a government that promotes a participatory and influential culture in the social and community development. (Pasto, Alcaldía municipal, 2016)

#### Participation mechanisms and organizations

Taking into account that the main asset of the Municipality, in the physical space is the rural space, it becomes decisive for sustainable and competitive development, because it has a high potential in the environmental supply. (Land Management Plan Pasto 2012 - 2027). As a result, there are agricultural or environmental organizations registered in the Chamber of Commerce from the Municipality of Pasto, which are presented below.

Table 0.66. Productive Organizations Municipality of Pasto

Location	Organization Name	Activity	Incorporation
Village of Santa Clara	Agricultural & Environmental Association Nuevo Futuro	Productive & Environmental	13/10/2015
Village of Caldera Centro	Agricultural & Environmental Association Santa Clara	Productive & Environmental	14/05/2002
Township of La Caldera	Social, Environmental, Handcrafts & Agricultural Foundation of Nariño	Productive & Environmental	04/09/2008
Village of Guadalupe	Agricultural & Environmental Association Cuenca Alta San José De Casa	Productive & Environmental	11/05/2009
Village of La Victoria-Catambuco	Boatman Association for the Agricultural, Environmental & Tourism Development	Productive & Environmental	10/07/2014
La Huerta Plot 504 Village of Rio	Agricultural & Environmental Association San Isidro	Productive & Environmental	08/05/2014
Village of La Concepción Alto	Guinea pig & Environment Association Santa Clara	Productive & Environmental	08/04/2014

Location	Organization Name	Activity	Incorporation
<b>Corredor</b>			
<b>Township of Santa Bárbara Village of</b>	Agricultural & Environmental Association Asocaldera	Productive & Environmental	22/07/2014
<b>--Manzana J Casa 19 Barrio Pasto</b>	Agricultural & Environmental Association Flor De Café	Productive & Environmental	24/09/2015
<b>Village of La Tebaida Township of</b>	Agricultural & Environmental Association San Martin De Guadalupe	Productive & Environmental	30/09/2002
<b>Cra. 33 N° 7-29 San Vicente</b>	Agricultural & Environmental Association La Victoria De Catambuco	Productive & Environmental	18/09/2002
<b>Calle 12 No 41-74 Villas</b>	Eco-turistic & Agricultural-Environmental Association La Represa Del Rio Bobo	Productive & Environmental	09/03/2012
<b>Village of El Naranjal Township of</b>	Agricultural & Environmental Association La Concepción	Productive & Environmental	12/05/2009
<b>Village of Jurado Township of</b>	Agricultural & Environmental Association La Concepción Divino Niño	Productive & Environmental	17/06/2009
<b>Carrera 24 No. 11 - 53</b>	Foundation for the Agro-environmental and Social development of the Southwest	Productive & Environmental	27/05/2010
<b>Village of La Esperanza Township of</b>	Agricultural Association Artesanal Y Ambiental El Roble	Productive & Environmental	05/11/2010
<b>Township of De Santa Bárbara</b>	Agricultural & Environmental Association Renacer Del Campo	Productive & Environmental	11/10/2002
<b>Aquine 3 Sector 3 Casa B 3</b>	Sugar cane Producers, Livestock & Environmental Association El Progre	Productive & Environmental	08/04/2002
<b>Village of Pradera Bajo</b>	Environmental, Productive, Eco-turistic & Agricultural	Productive & Environmental	05/07/2011



Location	Organization Name	Activity	Incorporation
	Association Refu		
<b>Calle 17 No. 34 A - 32 Barrio</b>	Agricultural & Turistic collective Jurado	Productive & Environmental	22/01/2014
<b>Manzana 13 Casa 21 Pasto</b>	Agricultural, Environmental & Popular Association of Galeras	Productive & Environmental	07/07/2014
<b>Village of San Luis-La Laguna</b>	Agricultural & Environmental Association of Woman Head of Household	Productive & Environmental	05/05/2014
<b>Village of Mojondinoy Casa 6</b>	Agricultural & Environmental Association Santa Bárbara	Productive & Environmental	12/05/2014
<b>Village of Santa Clara Township of</b>	Association for the Agricultural Development Integral	Productive	10/06/2009
<b>Village of Caldera Centro- Township of</b>	Fique & Agricultural Producers Association of the Municipality	Productive	27/05/2014
<b>Township of La Caldera</b>	Federation of Associations of Agricultural Producers & Environment	Productive & Environmental	15/12/2015
<b>Village of Guadalupe</b>	Association of Agricultural & Fish farmers of Colombia	Productive	21/12/2006
<b>Village of La Victoria-Catambuco</b>	Mixed Agricultural Social Group	Productive	23/05/2003
<b>La Huerta Lote 504 Village of Rio</b>	Agricultural Producers Association El Carmen	Productive & Environmental	16/05/2014
<b>Township of Genoy</b>	Natural Reserve Pullitopamba	Nature Preservation	Not registered
<b>Township of El Encanto</b>	Natural Reserves of the Civil Society - Affiliated to Resnaturales.	Nature Preservation	Not registered

Source (Cámara de Comercio de Pasto, 2016)

The participation of the inhabitants of this major territorial unit is presented in a constant manner in different scenarios for dialogue, debate, exchange of knowledge and the influence of public policies, in this sense the contexts are promoted by the Municipal Council, The Territorial Planning Council, The Women's Citizens Council, The Municipal Disaster Prevention Committee - CLOPAD, The Municipal Council of Social Policy, The Environmental Education Committee, The Transitional Justice Committee, The Municipal Council of Culture, The Senior Citizens Committee of observers - COPEM, The Association of Health Users, The Municipal Council of Social Security in Health, The Committee on Epidemiological Surveillance, The Peace Committee, The Monitoring Committee on Law 1257, Committee of observers for the concession Rumichaca - Pasto - Airport, Committee of observers MOVEER, The Mobility and Transit Office of the Municipality of Pasto, The Comprehensive Committee of Observers for the attention in food security, psychological accompaniment and effective aid for victims of forced displacement, among others.

The spaces of participation seek to provide the population with an organization that manages, controls and verifies the provision of services, fulfillment of rights, execution of programs, initiatives, projects and other activities that exercise political control over the municipal administration, towards creating a better, inclusive, participatory and with better quality of life community of the civil society.

It is possible to observe that all this series of spaces have an important presence within the area of influence Pedregal - Catambuco segment of the Road Project Rumichaca - Pasto, since they promote the control, and represent the population that influences the area.

According to the official information, there are participation spaces in the Municipality, such as those we can observe in the following table:

Table 55. Community participation spaces. Municipality of Pasto

NAME	LOCATION	PRECENSE TIME IN THE ZONE
Community Action Councils	Municipality of Pasto	Not registered
Civil Defense	Municipality of	47 years

NAME	LOCATION	PRECENSE TIME IN THE ZONE
	Pasto	
<b>Firefighters</b>		08/02/2007
<b>Social &amp; Environmental Community Association Rosario De Males</b>		19/06/2000
<b>Environmental Friends Association for Colombia</b>	Santa Bárbara	20/01/2012
<b>Cultural &amp; Environmental Foundation Pie De Anima Obonuco</b>	Municipality of Pasto	27/07/2005
<b>Foundation for the Social – Environmental Development Funda Guiza</b>	Municipality of Pasto	28/05/2013
<b>Corporate Environmental Association Red de Hilos</b>	Jongovito	26/04/2013
<b>Fish Farmers &amp; Environmental Association Las Palmas</b>	Municipality of Pasto	10/05/2013
<b>Social, Environmental, Touristic &amp; Ecologic Association Santa Rosa Aso</b>	Municipality of Pasto	27/11/2008
<b>Environmental Association Sembrando Futuro Las Encinas</b>	Nariño	09/12/2008
<b>Environmental Fish Farmers Association La Esperanza</b>	Municipality of Pasto	19/11/2008
<b>Environmental Youth Association Arco Iris</b>	Municipality of Pasto	08/06/2009
<b>Foundation for the Human, Environmental &amp; Social Development of the Territory</b>	El Encanto	29/09/2014
<b>Environmental Touristic Guides Association El Encanto</b>	Municipality of Pasto	20/05/2015
<b>Foundation for the Rural &amp; Environmental Development of Nariño</b>	Gualmatán	08/07/2015
<b>Environmental Foundation Pachakutiq</b>	Santa Bárbara	05/10/2015
<b>Environmental Foundation for the Harmonic Development of The Region</b>	Gualmatán	11/02/2016
<b>Environmental Foundation Planeta Vivo</b>	Aticance	02/03/2016

<b>NAME</b>	<b>LOCATION</b>	<b>PRECENSE TIME IN THE ZONE</b>
Foundation for the Rural & Environmental Development of Nariño Renacer	Gualmatán	07/04/2016
Agricultural -Environmental Foundation of the South	Catambuco	15/07/1996
Foundation for the Environmental Preservation & Sustainable Development	El Socorro Cimarrón	05/02/1997
Corporation for the Social & Environmental Development	Santa Bárbara	17/09/2004
Environmental Foundation Sindagua	Municipality of Pasto	17/09/2003
River Association for the Environment Protection & Development	Municipality of Pasto	03/08/2004
Foundation for the Environmentally Sustainable Development	Santa Bárbara	17/09/2001
Foundation for the Environmentally Sustainable Development Nuevo Amanecer	Santa Bárbara	07/02/2001
Geo Environmental Foundation Fug	Santa Bárbara	08/09/1999
Environmental Foundation Pro Vida	Santa Bárbara	08/05/1997
Foundation for the Social & Environmental Development & Life promotion	Catambuco	17/03/1998
Human - Environmental Foundation for the Sustainable Development	Catambuco	27/12/2004
Environmental Foundation Planeta Verde	Aticance	24/09/2007
Colombian Foundation for the Environmental Education & Ecological Development	Municipality of Pasto	29/05/2012
Eco - turistic & Environmental Indigenous Foundation Taita Mavisoy	Municipality of Pasto	15/05/2013
Social, Environmental, Touristic & Ecological Association	Municipality of Pasto	05/05/2011
Environmental footprint Foundation	Municipality of Pasto	28/06/2013

NAME	LOCATION	PRECENSE TIME IN THE ZONE
<b>Corporation Miramontes Rural Tourism, Environmental &amp; Biodiverse Management</b>	Jongovito	10/09/2013
<b>Environmental Foundation Yacu Causai</b>	Catambuco	08/02/2007
<b>Association Aspetracam</b>	Municipality of Pasto	

Source (Cámara de Comercio de Pasto, 2016)

The participation of disaster and emergency assistance institutions (Civil Defense, Firefighters, Red Cross), are present in the city, although without the logistical conditions sufficient to aid on eventual contingencies of the population.

It is important to emphasize that within the Emergency Plan due to the activation of the Galeras Volcano, the municipal administration, institutions and agencies, create their own emergency brigades, to serve as support to Civil Defense, Red Cross and Firefighters. In the case of participation spaces established by law, there are voluntary organizations, with the participation of the civil society, working with public budgets set in the fiscal policy and national public finance.

It can be concluded that, it can be stated that the participation of the inhabitants of this larger territorial unit is always visible in a constant way in different scenarios for the dialogue, debate, exchange of knowledge and the incidence in public policies, in the urban and rural sectors of the Municipality, indicating that it has an adequate community participation.

On the other hand, minor territorial units seek to participate in spaces of permanent encounter for the dialogue and the collective construction of common objectives, in the head of a leader and a work team that make up the Community Action Council, elected by popular vote, which seek to solve people's needs with the principle of solidarity and autonomous organization. Through these channels, the community presents its requests, nonconformities, and in case of being affected, and from which, it is sought, to create plans and collective initiatives for the improvement in this territory. In addition, Pasto has incorporated different mechanisms of similar structure, such as associations, foundations and any type of groups that allow the monitoring of the processes that are managed in the communities.

Regarding El Pedregal - Catambuco segment of the Rumichaca - Pasto Road Project, the community organization is represented by the Community Action Councils and in turn by the Local Management Boards - JAL, a relevant organization for community participation in the Municipality, as it is shown in Table 0.21

Table 0.67. Community Action Councils in the area of influence of the Project

Location	Establishment by the Municipal Attorney's Office:		Community Action Council President Name
Gualmatán Alto	0008	21/01/2003	Luis Enrique Maigual
Vocacional	0061	14/05/1991	Manuel Tutalchá
Gualmatán Centro	2123	30/11/1962	Luis Enrique Maigual
Cubijan Alto	11	28/11/1981	Jaime Ñañez
Cubijan Bajo	720	06/12/1966	Carmen Inguilan
La Merced	26	02/02/1971	Carlos Calderón
San José de Catambuco	22	01/06/1986	Servio Tulio Delgado
Catambuco	241	11/04/1964	William Timaran
Huertecillas	007	16/12/2002	Miguel Ángel Maigual
Catambuco Centro	8	10/01/1962	Mauricio Timaran

Source (Gobernación de Nariño, 2016)

The Municipality of Pasto as the capital city of the Department of Nariño is in a socioeconomic situation that has allowed it to be at the forefront of the great cities of Colombia, however Nariño and mainly Pasto has been excluded from the rest of the country due to the distance from other cities, access by land routes in poor condition, presence of guerrillas carrying out roadblocks, common delinquency in the roads, among other social problems that has delayed its development.

Despite these adverse situations, Pasto has expanded and grown in political administrative aspects, and has achieved an interesting growth related to its coverage and access to different services.

Pasto is divided into 12 communes and 17 townships, which allow to observe the growth of the city, expanding more and more to the bordering areas where there are townships and the rural area of the Municipality.

Regarding the area of influence of the project, it is observed that Catambuco and Gualmatán are located as a zone of population and socioeconomic growth, however, governmental and non-governmental institutions are not able to meet the needs of the area. Pasto to be the capital of the Department has the presence of a variety of organizations and institutions that seek to fulfill the basic needs of the community.

Pasto does not have economic and financial resources in case of any eventuality, the resources depend on the General System of Contributions.

In conclusion, it is defined that the institutional capacity of the municipalities of Imués, Yacuanquer and Tangua, is focused in the public sector, since the territorial authorities at municipal and departmental levels, have advanced with initiatives for the promotion of programs or projects in the different sectors. The institutional presence, of a public nature is the one that provides local communities with basic needs.

These municipalities, like the majority in the Department of Nariño, are located in the sixth category, that is to say, they correspond to municipalities with smaller number of inhabitants also with current income of free destination.

The municipalities in the area of interest, are characterized by a low capacity in the collection of statistical information required for the implementation of public policies, as well as difficulties in planning public expenditure and the provision of public utilities, and social services. As well as the lack of skill in all the sectors of local government and the weakness for transmitting skills to new officials, the development of human and institutional capacities is vital, in order to strengthen the internal structure and the implementation of strategies that improve governability of the territory.

Regarding the other municipalities in the area of study, Pasto as a departmental capital, is located in the second category and therefore enjoys greater institutional capacity, guaranteeing a bigger coverage and quality in the provision of public utilities and social services. Likewise, the management planning, in terms of budget, control and to sought to respond to the process of its mission and provision of services to the community, places it in a privileged place in the Department, since it has a big capacity to assist the



different situations corresponding to its competence. In addition, it includes, the strategies for improvement the integral system of participatory public management.

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### 5.3.8 Development Trends

Considering the articulation between planning and development plans (municipal, regional and national) and how they relate to the characteristics of the area of influence and the project, favors to foresee coordinated actions and that the diverse interests are represented in collective actions with a vision of sustainable development.

“Nariño has a great possibility of development with the promotion of productive chains, taking advantage of the border situation; the special economic zones of export and free zones. Creating strategic alliances is necessary.” (Nariño C. R., 2012).

The above is a trend of development in the Department of Nariño, considering that if the impulse to productive chains is achieved, Nariño will move from being a supplier of raw materials, to generate a greater added value to the products through industrialization, which will be achieved through processes of association of small and medium producers, entrepreneurs, inter-institutional articulation, the use of science, technology and innovation.

In the 32 departments of Colombia, the national government promoted the creation of Regional Competitiveness Commissions (CRC), which foster productive development and generate competitive and innovative environments, this way in the year 2007 the Regional Competitiveness Commission of Department of Nariño – CRCN started, with the purpose to coordinate, formulate, evaluate and follow up on the Regional Competitiveness Plan of Nariño, with a vision of development built collectively, between public and private institutions and the academy; the identification of projects that once developed, will improve the quality of life of the population, increase the levels of competitiveness and the levels of investment both at national and international levels in the Department of Nariño.

The Nariño Regional Competitiveness Plan is formulated taking into account the region's vocation, which includes its particular characteristics, geographical location, land uses, the potential of the sub regions and the market.

Among the strategic objectives of the Nariño Regional Competitiveness Plan is the strengthening of existing and emerging production chains, with prioritized projects such as the following:

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Development and improvement of the productive chain of tourism through the improvement of destinations and tourist attractions in Nariño.

Strengthening the coffee production chain in the Department of Nariño.

Establishment of a Horticultural chain for the commercialization of fruits and vegetables.

Incorporation and strengthening of the Nariño Guinea pig production chain, through the implementation of family productive farms, that guarantee food security and a sufficient market for the national demand.

Development and strengthening of the dairy and meat chain in the municipalities part of the milk producers of the Department of Nariño.

Implementation of a crop diversification strategy in the Nariño wheat and bran area.

Development and strengthening the chain of potatoes

Development and strengthening the broccoli chain

Implementation of technological innovation agendas for the production chains.

Implementation of organic agro-productive models with cleaner technology, according to potential and productive traditions of each region in the Department.

Below there are some reasons why, the above are considered productive Nariño bets:

“Studies indicate that coffee, after oil, has greater volumes of transaction in the world. The Department of Nariño has 32,068 hectares distributed in 40 municipalities, that generate 31 thousand permanent jobs and a significant amount in times of harvest. Nariño exports the total of its special coffee production, positioned in the specialized markets of North America, Europe and Japan.” (Nariño C. R., 2012)

“In Nariño, potato farming involves 25,000 families, 3,600,000 annual wages and 350,000 indirect jobs. It is the largest employer in the rural sector because of the high labor requirements and greater participation of all family members. From the total area planted in the Department, the municipalities of Ipiales, Pasto, Pupiales and Túquerres, are the most outstanding” (Nariño C. R., 2012), Two of which belong to the area of influence of the Rumichaca - Pasto road project. See Image 0.1

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Image 0.118 Panoramic view of a potato crop in the rural area of the Municipality of Pasto

Source (Plan de Desarrollo Municipio de Pasto 2012 -2015)

“The importance of a chain is given in the interrelationship of the links that made it up, so that a product, good or service can be developed competitively; for the case of Nariño, the production chain of the guinea pig is the generator of employment and income in 86% of the municipalities of the Department, benefiting approximately 30,000 families dedicated to raise and market the Guinea pig.” (Nariño C. R., 2012)

For the year 2010, the Departmental Assembly approved the Ordinance No. 20 from November 11, by means of which it adopts as public policy the agreement of competitiveness of the chain of production of the Guinea pig in the Department of Nariño, in the same way, the following lines of action were defined: political - social, productive, commercial, financial, infrastructural, environmental, agroindustry and research. Each one of them has defined objectives, budget, strategies, stakeholders; that must be implemented from 2011 to 2017. Through the Ordinance, it is intended that the Ministry of Agriculture recognizes the production of guinea pig as a production chain, for which all the documentation has already been submitted to it, required in order to achieve this purpose and see how public policy affects the development of the sector, making it a product of great importance for the region, in pursuit to export it. (Nariño C. R., 2012)

Tourism encourages trade, mobilizes a large number of people every year, and it is an important source of foreign exchange. Nariño is considered as one of the tourist potential region of Colombia. The capital of the Department of Nariño has registered an increase in the demand for aesthetic, ophthalmological and dental medicine services by

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national and foreign visitors, especially from Ecuador, which proposes the challenge of strengthening health tourism.

The Department has main tourist attractions: Las Lajas Sanctuary, La Laguna de la Cocha, The Natural National parks of La Corota, La Planada, Ñambi and Biotopo; The Cumbal Lagoon, the Juanambú Canyon Park, the Galeras Flora and Fauna Sanctuary, the Chiles, Cumbal and Azufral volcanoes, the beautiful beaches of Tumaco.

The Carnival of Blacks and Whites is a transcendental cultural event in south-western Colombia, as well as a tourist attraction for those who come from other departments of the country and from abroad, for the artistic and festive expression of this carnival that reaches its maximum splendor during the January 4, 5 and 6 of each year. (see Image 0.2) It was “Declared” Intangible Heritage of Humanity” by the United Nations Educational, Scientific and Cultural Organization - UNESCO and by Resolution No. 1557 of September 24, 2007 from the Ministry of Culture, it is declared that the Carnival of Whites and Blacks as an asset of Cultural Interest for the Nation.” (Nariño C. R., 2012)



Image 0.119 Artistic Expression from the Whites & Blacks Carnival “Intangible Heritage of Humanity”

Source (Plan de Desarrollo Municipio de Pasto 2012 -2015)

This contextualization has been made, considering that in the major and minor territorial units that will be described below, the development trend is related to the social-economic characteristics mentioned above, that is to say, in those where the main agricultural product is coffee, have possibilities to participate in the project prioritized by the Regional Commission of Competitiveness, called Strengthening the coffee production chain in the Department of Nariño. The potato is an important agricultural

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product in two of the major territorial units of the Rumichaca - Pasto road construction project, such as Ipiales and Pasto. For this reason, all the efforts that the national, departmental and municipal organization make to boost the potato production chain, will have a positive impact on the generation of employment in these communities. In addition, the fourth generation road will contribute to the agile and timely commercialization of agricultural and livestock production in the major and minor territorial units, with the possibility of forming a free zone in the section under study, with the benefits that this entails, after completing the fulfillment of the requirements for its constitution such as: have the conditions to be supplied with basic infrastructure, a prior favorable concept of the intersectoral committee, the investment and employment commitments, among others.

The carnival of whites and blacks is a cultural event that is celebrated in the major territorial units and it has a trend of tourism development, which year after year is extending to the departments of Cauca, Putumayo and the neighboring country of Ecuador. The carnival generates income for families dedicated to tourism, commercial, crafting and service activities. The construction of the fourth-generation road will encourage tourism as it will increase the number of people who wish to reach their destination in an agile, safe way, with all the services that the Concessionaire Vial Union of the South offers to the users of the route.

#### 5.3.8.1. Major territorial units

The following are aspects that contribute to understand the relationship between the socioeconomic characteristics of the area of influence, the plans at a national, regional, municipal and project levels.

Functional unit 4

Municipality of Imués

#### Comprehensive Socioeconomic Overview

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From the analysis of the population dynamics in the Municipality of Imués, there is a decrease in the population register in the urban and rural areas. Considering the population decline that has emigrated since 1993, it leads to reflect on the possible causes, for this population decline, which according to the Development Plan of the Municipality 2016 -2019, the abandonment of the countryside, regarding agricultural activities is due to the lack of water, lack of opportunities in the region and many families left out to look for different economic horizons in other municipalities of Nariño, other cities of Colombia and other locations in the neighboring country of Ecuador. The impact of climate change has affected the abandonment of the countryside, combining it with the lack of economic opportunities and living conditions. This is associated with the economy in the Municipality of Imués that has the base of its production structure on agricultural activities, characterized by “rudimentary smallholder, production, the use of family labor and the low use of technology, with the generation of low productivity in crops.” (Imués, Alcaldía Municipal de, 2012 ). However, because of the hard topography, the soil affected by erosion and its great dryness, the plots destined for this activity are reduced. For decades, the main product was wheat, and now, due to the climatic conditions and height, currently it is important the production of corn, peas and beans, as well as the fique, coffee, citric fruits, tree tomato, barley, potato, cherimoya, guava and onion.

Regarding the public utilities in the Municipality of Imués, the coverage gets up to 90%, except in the sewage system, in which it is evident a deficiency in the management of sewage and disposal of excrement, particularly in the rural sector, where coverage only reaches 31.6%. The service coverage of gas, telecommunications and internet, transportation is low.

According to the Development Plan 2012-2015, in the Municipality of Imués it is observed that the largest migratory movement is within the population from 0 to 17 years, which is estimated as a constant at the municipal level, originated from the search of labor alternatives and due to family situations.

The population of the Municipality of Imués in general terms, is mainly young, since it represents 39.2% of the total population. Therefore, programs should be directed to the youth, who are expected to lead development processes in their Municipality.

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According to the Imués Development Plan, the community stated in consensus that climate change has generated a great drought in the territory of Imués, and because of that, it is necessary to prioritize investments for the preservation of water sources and the technical management of natural resources. It is considered that water is the problem of the region by the decrease of productivity in the countryside.

Territorial development and land management plans grounds (National, departmental and municipal)

“The natural wealth of the Pacific, as well as its biodiversity, make tourism an important part of the region which has a great potential to be exploited for the benefit of the local community. This includes ecotourism as well as adventure and nature tourism. According to the Ministry of Commerce, Industry and Tourism, the four departments of the Pacific region (Cauca, Chocó, Nariño and Valle de Cauca) have identified a potential of 37 tourist products that can be developed in the territories during the next 4 years and, these, 43% corresponds to initiatives related to ecotourism, adventure and nature. Taking into account this effort, the national government should support these initiatives in order to generate the necessary conditions for the development of this sector in the region. (Presidencia de la República, 2014)

In the National Development Plan 2014 -2018, the promotion of tourism is considered as an instrument for sustainable regional development and peace.

It is articulated with the Departmental Development Plan 2016-2019, as it aims to Position tourism in Nariño, through the strengthening of organizations and the improvement of tourism competitiveness, through the formulation and implementation of the Strategic Plan for Sustainable Tourism of Nariño, the tourist information system, implementation of strategies for education in tourism.

Once identified the tourist potential of some villages in the Municipality of Imués, according to the Development Plan of the Municipality 2016 -2019, there is a project to promote spas and recreation centers with strategic alliances with COMFAMILIAR DE NARIÑO. In the program called Entrepreneurship, Tourism and Sustainable Development, the objective is to support entrepreneurship actions focused on tourism and sustainable development, the products to be obtained are: Tourism guidance, new

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business opportunities, meetings for habits, customs and healthy life culture, peace for all, aiming also to support, create and consolidate all forms of productive partnership in the urban and rural sectors, enhancing human talent.

### Comprehensive Socioeconomic Analysis of the Municipality of Imués

The comprehensive socio-economic analysis of the Municipality of Imués as the result from the articulation between the most relevant aspects examined in the different components, or the so-called socio-economic panorama in the present document, and the plans in execution or national, departmental and municipal order projection. It means, the articulation with the characteristics of the area of influence together with the project.

The Municipality of Imués ha identified the increase of the migratory phenomenon in search for better opportunities, mainly from the young population, another of the reasons is that water is considered one problem of the region by the decrease of productivity in the countryside. In national, departmental and municipal development plans, government institutions have also identified tourism as an important economic activity as a source of income, work, and recognition of local geography. For this reason, companies such as Comfamiliar de Nariño has plans to invest in tourism projects in the Municipality of Imués, in the program called Entrepreneurship, Tourism and Sustainable Development.

The rural population of the Municipality, uses village roads to take their agricultural products in cargo horse, later to be transported in small vehicles towards the local and regional markets. The population that lives in the right of way zone of the current route, commercializes in this zone fruit, such as guava, cherimoya and oranges.

Therefore, the construction of a fourth-generation road with international specifications will have a positive impact on the improvement of the marketing channels for agricultural products, by accessing the markets quickly from the center of the country, The neighboring country of Ecuador and the Pacific zone and lower costs in terms of transportation.

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On the other hand, one of the ways some people commercializes fruit products outside the road will be transformed, not only because Act 1228 of 2008 which does not allow invading the right of way zone, to develop commercial activities or any type of construction, but also because the construction of the freeway Rumichaca - Pasto provides different marketing options.

#### Municipality of Yacuanquer

#### Socioeconomic panorama of the Municipality of Yacuanquer

The Municipality of Yacuanquer stands out because it has landscapes with a singular beauty, biodiversity of flora and fauna, water mirrors like the exotic lake of Telpis. The natural treasures of this site make it very attractive for ecotourism and research purposes.

“Yacuanquer has 860 hectares within the Sanctuary of Flora and Fauna Galeras, within very important sites stand out from all points of view, such as the Lake of Telpis and the Lake of Mejía, which not only represent the geographical beauty of the Municipality, also they are scenarios that shows the need to preserve the environment, from where the water streams like Telpis and Magdalena come out, supplying the aqueducts from both villages and the city. In addition, there are other streams that are born in the Sanctuary that supply 100% of the aqueducts of different Villages.” (Yacuanquer, Alcaldía municipal, 2014 )

Currently, the development of the Ecotourism Program is carried out in the Telpis sector, Municipality of Yacuanquer, where there is a Village called GUAIRA ÑAN “Camino del viento”, the Village has a length of 1,250 kilometers, crossing the two ecosystems: Andean high Plateau and Moorelands; ending with a viewpoint that allows to see the great beauty Lake of Telpis.

On the other hand, regarding the identification of the index of unsatisfied basic needs, one of the indicators in the determination of this index, refers to the situation of poverty that the population of the Municipality of Yacuanquer is currently having, finding that in the census of the Year 2005 of DANE, the “NBI index for the municipal capital, indicates

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that 39.87% present unsatisfied basic needs, while in the rural area this indicator increases to 70.91%”

It is considered that this is related to the economic characteristics in the Municipality of Yacuanquer, occupation and land ownership, since, as in most parts of the Department of Nariño, it is strongly influenced by historical processes that have allowed great extensions of land to be concentrated in the hands of a few owners and the small holding of land will be the hands of most of the population with smaller possibilities of production.

The primary sector in the Municipality is based on three main activities: agriculture, livestock and mining, being corn, bean, coffee, potato and wheat the most prominent. “Agriculture is developed on a small scale and its production is basically for self-consumption and marketing in the local market. The low production has not allowed to supply regional and national markets.” (Yacuanquer, Alcaldía municipal, 2014 ).

The provision of the aqueduct service is made through 13 systems, most are individual and four offer the service to more than one village. In general, they are managed by the aqueduct management boards. They do not have macro or micro measurement services. They are conventional systems, with little technique and 40% of the systems have already complied their useful life.

Globally for the Municipality of Yacuanquer, we can establish that the coverage of access to aqueduct is above 99%, The great difficulty is its quality.

Territorial development and land management plans grounds (National, departmental and municipal)

In the National Development Plan, specifically in the chapter transformation of the countryside, the objective is to offer rural housing solutions. It is planned to deliver 100,000 housing spaces for comprehensive rural housing during the four-year period, in order to improve the living conditions of the population. The Yacuanquer 2016 -2019 Municipal Development Plan, includes on the management of national resources programs Free Housing and Construction of people's own plots, programs designed to benefit families in a situation of vulnerability and social exclusion. "About this matter, in 2015, grants were obtained for new housing spaces, where 232 persons were grantees and 37 housing grants were allocated" (Plan de Desarrollo de Yacuanquer, 2016 -2019)

In the National Development Plan 2014 -2018, the promotion of tourism is considered as an instrument for sustainable regional development and peace.

It is articulated with the Departmental Development Plan 2016-2019, as it aims to Position tourism in Nariño, by the strengthening of organizations and the improvement of tourism competitiveness, through the formulation and implementation of the Strategic Plan for Sustainable Tourism of Nariño, the tourist information system, implementation of strategies for education for tourism.

#### Comprehensive Socioeconomic Analysis of the Municipality of Yacuanquer

The high dependence of the primary sector in the rural area, implies risks, since the products are subjected to price volatility and the constant climatic changes that can affect production, since 74% of the population belong to the rural sector and the 26% belong to the urban sector, it is necessary to propose work alternatives for the population, in such a way, that this are not totally dependent from the primary sector. This way, the Municipality of Yacuanquer is characterized by predominantly having young population regarding the adult and elderly population, it is necessary to try to find other work horizons for the young people, guiding them and supporting them to take advantage of the opportunity of the landscape richness of their Municipality with the development of ecotourism, which has many benefits, such as job creation, environmental care, cultural progress and economic development.

The Municipality of Yacuanquer is one of the most promising in the Department of Nariño in relation to ecotourism for several reasons: raising awareness about the protection and proper management of natural resources, as a source of income for families who are dedicated to this activity and the strengthening of the cultural diversity of the region.

For this initiative, the Municipality of Yacuanquer has a potential of places in relation to landscape and cultural levels, such as the Lake of Telpis and The Flora and Fauna sanctuary of Galeras, Lake of Mejía, Tacuaya historic bridge, the mansion where the general Pedro León Torres died, located in the village of La Estancia, The Pedro León Torres Park, paragliding in the villages of Taindala and Chapacual, and ecological reserves of the civil society.

Due to the above, eco-tourism projects in the Municipality of Yacuanquer become a trend focused on development in this Municipality, that can be articulated with the road project Rumichaca - Pasto since one of the benefits of this project, is to increase the competitiveness of the country and the Region, the best way to do this is to contribute to the development of touristic projects, taking into account that tourism is considered as the “industry without smog” and the dual roadway will improve and motivate displacement to these important touristic sites.

### Municipality of Tangua

#### Socioeconomic panorama of the Municipality of Tangua

In the Municipality of Tangua, even when coverage in the urban sector exceeds 85% in the services of aqueduct, sewerage, energy, sanitation, telecommunications and transportation, in the rural sector there is no sewage system, the electricity coverage is 90%, and there is no sanitation, or gas services coverage. The coverage in relation to telecommunications and internet is 60%.

On the other hand, it is identified that in the Municipality of Tangua, according to the data provided by the DANE, “the percentage of unsatisfied basic needs in the whole

Municipality is 54.38%; in the Municipality capital, is 31.49% and in the rest of the Municipality is 60.1% “ (Alcaldia Municipal de Tangua .. , 2016).

The previous NBI index is related to the economic characteristics of the Municipality of Tangua; regarding land ownership, small holding predominates, the main economic activities are agriculture, livestock and the extraction of sand, which is developed in a traditional and low-tech way and its development has been detrimental because producers do not have modern and proper knowledge, not even the factors of quality soil, work and capital production, allow them to carry out the activity in better conditions. As a result, they obtain their subsistence income, mainly from small plots in which farmers only obtain resources to meet their family needs. The main agricultural products of the Municipality are wheat, corn, bean, pea and potato.

Territorial development and land management plans grounds (National, departmental and municipal)

In order to stimulate the growth of economic activities for the development of the coastline, the National Development Plan 2014-2018 seeks to “promote the sustainable use of the natural assets and the productive transformation of the region, generating their own value added and self-development by boosting productive systems that respond to the vocation of the region, the promotion of association capacities of the producers, the promotion of research.” (Plan Nacional de Desarrollo, 2014 - 2018).

The Ministry of Trade, Industry and Tourism will support the consolidation of fique, short stay tourism, pineapple, tourism, coffee, dairy products, fruit and vegetable, fresh fruit, white protein clusters and those that are managed with the methodology of competitive routes or initiatives, to strengthen competitiveness during the four-year period.

In the Tangua 2016 -2019 development plan, in the Drinking Water and Basic Sanitation for Tangua program, a four-year replenishment of the regional rural aqueduct network is planned for the four-year period, as well as the optimization of the multi- village aqueduct, Los Ajos, Cebadal, Buena Esperanza, which will have 1500 linear meters of extension in the rural sewerage network and populated centers.

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In the economic dimension, the agricultural sector, the program “for the sake of our countryside, join to the development and dignity of our farmers” has the goal for the four-year period, to create 11 self-sustaining and clean production (model) farms and 500 home and school vegetable gardens implemented, 2 irrigation districts completed, adequate and in full operation. (Tangua, Alcaldía municipal, 2016 )

Regarding transport and the roads network, the main aim is improving the mobility conditions of the urban and rural population in the Municipality of Tangua, a routine maintenance of 155 kilometers of roads with rural impression plate has been planned in the four-year period. (Tangua, Alcaldía municipal, 2016 )

For the environmental management and biodiversity dimension of the Tangua Development Plan 2016 - 2019, it is planned to implement a project for the ecological restoration and preservation of strategic zones in areas of hydric reload, with the goal for the four-year period, to acquire 5 hectares for the forest restoration of micro basins.

About housing, it is planned for the four-year period, the construction of 250 homes, the improvement of 100 homes and buy 100 plots.

According to the above, special care has been taken to ensure that the route of the road on the Municipality of Tangua is not intercepted with the lands chosen by the municipal administration to execute the aforementioned projects.

#### Comprehensive Socioeconomic Analysis of the Municipality of Tangua

The low-income levels of families who do not produce enough surpluses to buy land, inequitable distribution of wealth and high levels of unemployment in the rural sector, are aspects that result in a high supply of unskilled and poorly valued labor, which generates in the population, the interest and need to take part in projects that offer employment opportunities, such as the Construction Project of the Rumichaca - Pasto double roadway. Project that will generate a positive impact on the generation of employment.

The plan for the 2016-2019 four-year period is the replacement of 25% of the regional rural aqueduct network, as well as the optimization of the multi village aqueduct

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Tambor, Los Ajos, Cebadal, Buena Esperanza, 1500 linear meters of network expansion of the rural sewage and populated centers; projects to be monitored in the framework of the development of the road construction project because it will guarantee to the community in the area of influence, the provision of public utilities, for which a coordination of the works is required, in such a way as to optimize the execution of these works in the area of intervention.

The communication with the Ministry of Planning of the Municipality of Tangua will provide information about the places where social housing projects will be carried out, within the framework of national, regional and municipal development plans, in order to prevent them from overlapping with the road construction project Double Roadway Rumichaca.

Pasto.

Functional Unit 5.1  
Municipality of Pasto

#### Comprehensive Socioeconomic panorama of the Municipality of Pasto

“Pasto maintains the highest unemployment rates in Colombia, evidencing a greater labor supply in relation to the existing demand. The city had an annual unemployment rate of 10.5% in 2014 and has been one of the municipalities that has reduced this rate, which was at 16.0% in 2010, according to FINDETER. (Alcaldía de Pasto, 2016)

In the urban sector of the Municipality of Pasto the coverage of the utilities of aqueduct, sewage, energy, sanitation, transportation, telecommunications and internet is over 90%. In the rural sector sewerage coverage is 7%, aqueduct coverage is 44%, sanitation is 48%, transport coverage is 60% since it does not cover all the villages.

Pasto is recognized as a Municipality with great cultural potential, it is home to great artists, painters, musicians, craftsmen and composers, whose work transcends the framework of the Carnival and have awarded them recognition at regional, national and

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international levels. The culture of Pasto is recognized as very diverse, mostly because of the Carnival of Blacks and Whites, as an element of greater cultural magnitude.

Territorial development and land management plans grounds (National, departmental and municipal)

The National Development Plan is based on eight main pillars: convergence and regional development, growth and competitiveness, equal opportunities, peacebuilding, innovation, environmental sustainability, good governance and international relevance. See Figure 0.1



Figure 0.86 Pillars of the National Development Plan 2010-2014

Source (Alcaldía Municipal de Iles, Plan de Desarrollo Municipal 2012 - 2015. Unidos para el Cambio por el municipio que todos queremos, 2012)

The challenge for the national, departmental and municipal authorities is to “Manage and promote the execution of the macro projects and projects that were contemplated for the Department of Nariño in the National Development Plan, period 2010-2014 “Prosperity for All.” Likewise, the fulfillment of the CONPES documents issued to favor



the economic and social development of the Department of Nariño and the commitments acquired by the National Government in the Community Councils and the prosperity agreements, to validate, adopt and promote the implementation of the Regional Competitiveness Plan; strengthen the Regional Commission for Competitiveness and Innovation and Local Development Agencies (Pasto, Ipiales and Tumaco) “ (Iles, Alcaldía municipal , 2012 )

“After the Government and private sector stakeholders announced the start of the logistic module of the Intermodal Master Plan 2015-2035, the National Council for Economic and Social Policy (CONPES) endorsed a document that establishes the guidelines to transform the tertiary network of roads over the next few years. The CONPES 3857, which took into account some of the suggestions made by the Colombian Chamber of Infrastructure (CCI), can be considered as a first step to improve the connectivity of rural areas. This will be a key tool to transform the countryside and consolidate peace.” (Cámara colombiana de Infraestructura, 2016)

With the identification of factors that have limited the quality of life of the population, the National Development Plan estimated that the poor transport infrastructure has been a cause to hamper development and thus optimum conditions for the population. “The backlog provision of logistics and transport infrastructure has been repeatedly identified as one of the main obstacles for economic development and peacebuilding in Colombia: since it generates high costs that make local products more expensive, reducing their competitiveness; hampering regional integration, generating self-contained regions and wasting the benefits of domestic trade and specialization; it slows down the growth of the countryside by increasing the transport price of the products to the main centers of consumption, and even hampers the presence of the State in many areas of the country through the provision of basic services such as education, health and safety.” (DPN, 2014-2018)

About the need to combine efforts to close the gap generated by the lag in road infrastructure, in recent years the National Government has focused on giving prevalence to this aspect, generating a whole institutional and regulatory framework aimed at promoting projects of this type “The National Administration (2010-2014) achieved important advances in the organizations of the sector (the creation of the National Agency for Infrastructure - ANI, the National Finance Organization for Development - FDN and the issuance of important regulations such as the Act on PPAs

and the Act of Infrastructure), all of them leading to better infrastructure executions.” (Camara Colombiana de Infraestructura, 2014, pág. 7). In order to develop projects in an optimal condition, an important budget has been allocated for this purpose including the private sector. “With the main aim of increasing the rate of investment in the sector, in recent years the National Government concentrated its efforts in tripling the resources of the national budget dedicated to the infrastructure, and attracting resources from the private sector under the scheme of Public Private Associations.” (DPN, 2014-2018)

In the interest of promoting the road infrastructure sector, the Fourth Generation of Concessions (4G) program emerges, as the most important initiative the Colombian government has taken in this regard. “Through the ANI, it was structured, and began the hiring of the most ambitious road program in the country's history, known as the “Fourth Generation of Concessions”, which includes more than 40 projects with an investment of about 47 billion pesos for the intervention of more than 7,000 km, of which more than 1,200 km have a double roadway.” (DPN, 2014-2018, pág. 118)

The road project of the dual roadway Rumichaca - Pasto is a 4G road project that the National Agency of Infrastructure ANI, awarded to the Road Concessionary Union del Sur S.A.S. through contract No. 015 of September 11, 2015, to carry out: definitive studies and designs; financing; environmental, taxation and social management; construction, improvement; rehabilitation; operation; maintenance and reversion of the dual roadway between Rumichaca and Pasto, According to technical annex 1 and other annexes part of the Contract, with the purpose of turning the existing infrastructure of the Rumichaca - Pasto corridor, in a route with high specifications, contemplating the construction of the second road, in addition to the improvement of the existing one.

The road project for the Rumichaca - Pasto dual roadway has a national and international importance because it will work as a solution to the mobility between the strategic border points between Colombia and Ecuador, it will increase the country 's competitiveness and the connectivity of the region, will optimize long-distance traffic with a design speed of approximately 60 km per hour, it will improve mobility and the service level of the road.

In addition, other benefits are generated, such as the generation of employment, the provision of services, the improvement of access to rural territories, the articulation of the development axis and the re-activation of trade and tourism.

“The National Department of Planning has identified partnership as a fundamental factor for the generation of conditions that will improve the standard of living of the rural population, since this figure provides families in the sector with possibilities to organize in community, it will increase and improve their productivity, lower costs, achieve real market access, develop economies of scale, increase bargaining power and achieve vertical integration. Currently, DNP's Rural Development Directorate is working on the construction of a policy guidelines document aimed at recognizing and promoting partnerships, which lead to the creation of organizations and groups with capacities to increase productivity and develop sustainable projects. This initiative is aligned with the National Development Plan 2010-2014 “Prosperity for all” and with the CONPES 3616 from 2009: “Policy guidelines for the generation of income for the population living in extreme poverty and/or displacement.” (Sociedad de Agricultores de Colombia. SAC, 2013)

The program of the Development Plan from the Municipality of Pasto, entitled “A sustainable, agroecological and equitable rurality”, strengthens rural life as a privileged scenario, aimed at achieving food security, the formulation projects such as: implementation of home vegetable gardens for rural families chagras pachawasi, the generation of rural business initiatives for young people, the improvement of agricultural productivity, technical assistance in the context, and technology transfer, ancestral seed production recovery plan, formalization of rural property and the implementation of irrigation in the plots.

**Project: Supply System Quebrada Piedras - Phase II**

“The overall objective of the Project is: to build the necessary infrastructure to provide drinking water for the expansion areas identified in the Territorial Ordinance Project of the Municipality of Pasto, with a priority in the Northeast (Aranda - Tescual) and South (Jamondino) areas, thereby enabling urban land development for the implementation of housing projects, mainly social. It also includes the installation of a short section of pipeline to Las Piedras Drinking Water Treatment Plant, the construction of a treatment

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plant with a capacity of 250 liter per second in Catambuco and the installation of a 16-inch diameter and 13.28 km long distance from Las Piedras Treatment Plant to the expansion highlands of northeastern Pasto. “ (Alcaldía de Pasto, 2015).

In September 2015, the President of the Republic inaugurated the second phase of “Quebrada de piedras” drinking water supply plant and highlighted that it will give Pasto the security for the supply of drinking water for the next 30 years, Benefiting 465,000 inhabitants of the urban and rural areas. In addition, thousands of Nariño people will benefit from 94 projects on water, sewage and sanitation. From these initiatives, 59 are completed and 35 are under execution. (Presidencia de la República, 2015)

The project for the second phase of “Quebrada de piedras” drinking water supply plant is located in the area of influence of the double road project Rumichaca - Pasto, because the water treatment plant is located in Catambuco, as shown in the following map and the intake is located in the Municipality of Tangua. (See Figure 0.2). The importance consists in that as it is a project of great social impact for the benefit of thousands of inhabitants of the rural and urban areas, it is necessary to articulate it with the project executors in order to avoid any type of interruption in the drinking water service to the population.

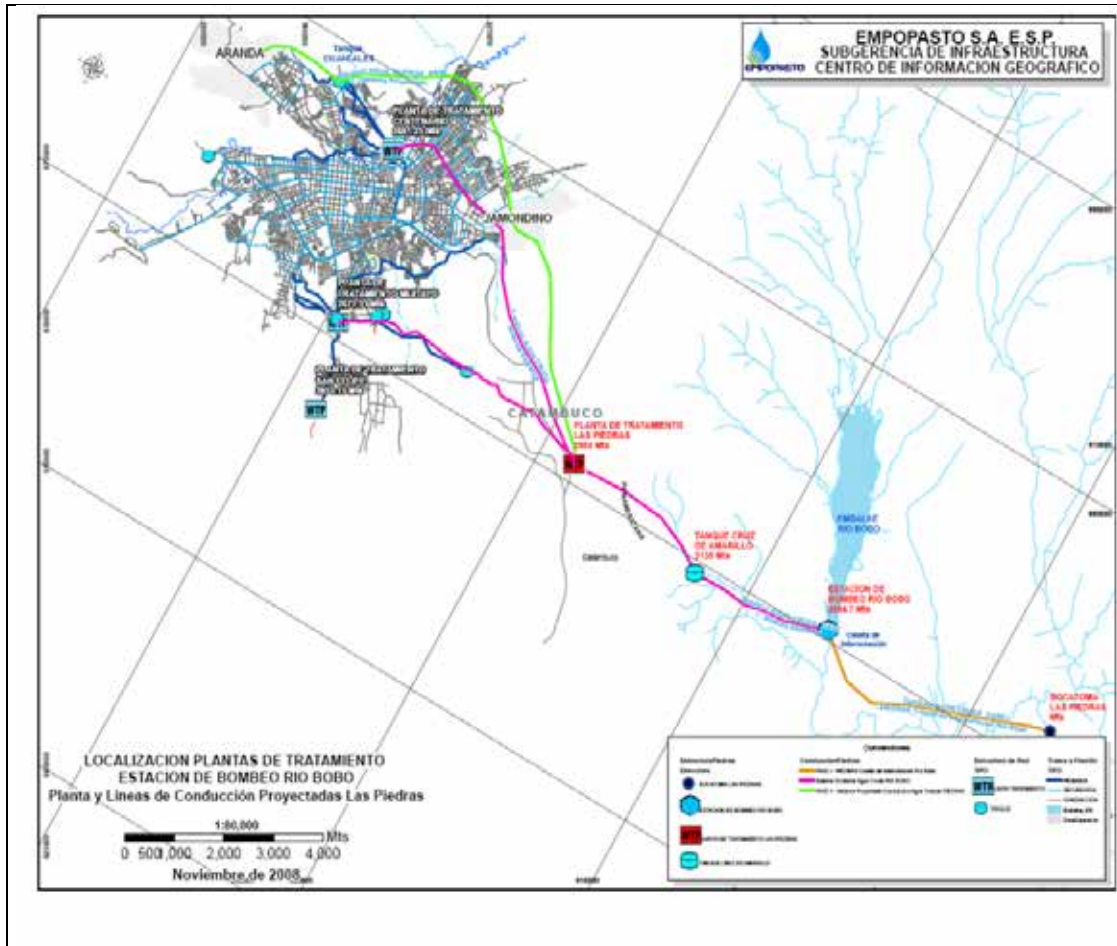


Figure 0.87 Location Scheme, Piedras Drinking Water Treatment Plant Source (Documento CONPES 3551 , 2008)

In the Pasto Development Plan: Pasto Productive Transformation 2012-2015, the Pasto entrepreneur program, has as its goal for the four-year period: the implementation of 60 agro-industrial enterprises linked to the rural population of the Municipality of Pasto, 170 agricultural productive associations created, supported and strengthened; 30 farms implemented for clean production.

The Pasto Turistic Program plans to build 10 tourist inns, 10 community rural initiatives implemented and operated, 5 productive transformation projects in relation to tourism implemented, 2 tourist docks built.

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In the program of drinking water and Basic Sanitation, the rural sector has as goal for the four-year period 15 village aqueducts were improved and/or built, 52 kilometers of network of aqueduct (populated centers) were built.

In the Pasto is Power Program, 90% coverage of the public lighting system in the rural sector is planned.

In the Program Strategic Projects and Mega-projects for development the following are included:

Management carried out for the identification, conditioning and commissioning of a side airport to the Antonio Nariño airport or improvement of the conditions and infrastructure of the current airport.

17 townships that will strengthen their cultural, craft and gastronomic offer through the project of magical towns.

Management carried out through alliances and public - private agreements for the construction of a new food supply, logistics, commercial and technological center in the industrial park.

Management for the implementation of the public - private enterprise for the supply of domestic gas and the construction of the gas pipeline and poliduct.

Management for the improvement and/or construction of the dual roadway of the Pasto - Popayán road.

From the strategic projects and megaprojects currently included in the Pasto Development Plan 2012 - 2015, the Airport Antonio Nariño located in Municipality of Chachagüi, is under current improvement of its infrastructure and the alternate airport is the San Luis Airport, located in the Municipality of Ipiales, currently having works to expand the new runway. These works contribute to improve the intercommunication with the rest of the country and the world, consequently it will increase the flow of passengers and/or goods arriving or departing from the Department of Nariño by air.

In the Program of the Pasto Development Plan, Living with Ownership, which aims to increase the offer of housing with a priority on social projects to reduce the quantitative deficit, there is a goal for the four-year period to build or acquire 600 rural social housing or with a priority interest, and it is planned to build and/or acquire 1100 social housing spaces for the displaced population and victims of the armed conflict. Build

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ENVIRONMENTAL IMPACT EVALUATION FOR THE RUMICHACA - PASTO DOUBLE-LANE PROJECT, PEDREGAL - CATAMBUCO SECTION, UF. 4 AND UF 5.1., CONCESSION AGREEMENT UNDER THE PPA NO. 15 OF 2015

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and/or acquire 350 social housing spaces for the relocation of families living in an area of risk.

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## Comprehensive Socioeconomic Analysis of the Municipality of Pasto

To counteract the unemployment figures, Pasto must strengthen and modernize its productive system, increasing its vocation and regional commitment, through strategies of competitiveness better defined within its condition as border city-capital. Some of these strategies are: Characterization and identification of regional competitive advantages, both in the urban and rural areas. Analysis and design of incentives for the creation of new companies in different production chains: crafts, dairy, horticulture, guinea pig production, fish, aromatic plants, among other new types cultural, health, tourist and gastronomic specialties. Consolidation of an information system for the supply and demand in order to provide a better service to the productive sector.

Pasto and most of the municipalities in the Department of Nariño has served as a food and raw materials supplier for domestic markets and industries in the interior zones of the country, known as the agricultural pantry of Colombia, generating income for the rural population. In order to take advantage of the agricultural potential, it is necessary to design strategies, engage resources and public and private efforts in the execution of productive projects.

The Carnival of Blacks and Whites, a transcendental cultural event performed in south-western Colombia, is a tourist attraction for those who come from other departments of the country and abroad, for the artistic and festive expression of this carnival that reaches its maximum splendor during January 4, 5 and 6 of every year. It is a great event, in which income is generated to families that develop tourism, commercial, crafting and services activities. The construction of the fourth-generation road will encourage tourism as it will increase the number of people who want to reach their destination in an agile, safe way, with all the services that the Concessionary Road of the South offers to the users of the road.

Nariño is considered as one of the tourist potential of Colombia. The capital of the Department of Nariño, registers an increase in the demand for aesthetic, ophthalmological and dental medicine services by national and foreign visitors, especially from Ecuador. Tourism in health will continue to rise with the improvement of mobility on the road by the construction of the 4G road.

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The communication with the Secretariat of Planning of the Municipality of Pasto will allow to know the places where social housing projects will be constructed, within the framework of national, regional and municipal development plans. In order to prevent overlap with the Rumichaca - Pasto dual roadway construction project.

The improvement plan for the tertiary network is good news for the mayors of the larger territorial units who now have the challenge of managing the implementation of such a necessary plan, both to improve the mobility of the inhabitants and the transport of agricultural products towards intermediaries and towards the final consumer, reducing costs and the time of displacement. On the other hand, tertiary roads can be used as alternate routes in the construction process and it will be ensured that the communities in the area of influence of the project, meaning, road users, will transit safely.

#### 5.3.8.2. Minor territorial units

The Community Action Council is one of the ways of association and organization of the communities which integrates people that have common characteristics that identifies them: for example, to live in the same physical environment, in this case the smaller villages or territorial units, that combine efforts and resources to seek the solution of the most important needs of the community.

Through the application of village property survey sheets, it was identified the interrelation of plans of the Community Action Councils in force with the development plans of the Municipality to which they belong.

The associations constituted in the villages of the area of influence, were also identified, since partnership is considered by the National Department of Planning as a fundamental factor for the generation of conditions that improve the standard of living of the rural population, which will be reflected in development trends.

#### Functional unit 4

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The minor territorial unit El Pedregal is inhabited by population with high economic dependence towards the commerce, since this activity is predominant and has been developed by the strategic location it has, because in this place join different roads with national and departmental importance such as: the Pan-American route that Communicates Pasto with Ipiales and the neighboring country of Ecuador; the route to the maritime port of Tumaco and other municipalities of the Department of Nariño.

Restaurants, cafeterias, hotels, barns and other businesses have, over time, consolidated as an economic alternative, which seeks to improve the income of the population in El Pedregal Town Center, taking the advantage of the traffic to offer their products and services; causing traffic jams and difficult the pedestrian traffic in the area.

The construction of the Rumichaca - Pasto road has been designed in such a way as to solve the previous problem identified in the center of El Pedregal where the vehicles stopping on the road prevent a safe mobility of road users in the sector.

The associations, the groups organized in the minor territorial units of the Municipality of Imués, are more likely to participate in the commercial dynamics through the identification of new markets, decreasing costs for obtaining discounts from suppliers of inputs, increase bargaining power and achieve vertical integration, which means, taking advantage of an opportunity according to the degree of mastery they want to perform over suppliers or customers.

The Community Action Council of Pedregal does not currently work on a project of community interest. In the Municipality of Imués website and the development plan of Imués 2012 -2015, there is a reference to the organizational political component of the present socio-economic study, productive organizations are registered dedicated to the exploitation of agricultural, livestock and services activities in the Municipality of Imués, from which the following association belongs to the Village of El Pedregal: Association of Pig Farmers El Pedregal ASPODE, dedicated to productive projects.

In the region, there are some technical poultry farms some others are artisanal farms, which chicken production is marketed in El Pedregal and some others in restaurants located in Pasto.

During the last decade, the Municipality of Imués has developed the tourist sector, given the climatic characteristics, the strategic position, the landscape beauty of some trails such as El Pedregal. Tourism initiatives that are strengthened or developed in these minor territorial units will have a route of high specifications that will reduce travel times, providing maintenance and road safety services 24 hours a day.

At a meeting in the Mayor's Office of Yacuanquer, it was discussed that in the territorial unit of Inantas Bajo, an area to develop a project of Construction of rural housing was identified, so it was requested to be included in studies and designs of the Road project. The country housing condominium is called Villa Maria, and it consists of 31 plots of 2500 square meters each, a total of 9.4 hectares throughout the project, and it is currently in the process of licensing. In the access to the villages of Inantas Alto and Inantas Bajo it is planned to install an impression plate, as well as to carry out a road maintenance as of November of this year.

According to the information provided by the Mayor's Office of Yacuanquer, which is mentioned in the organizational political component of this socio-economic study, there are no productive organizations dedicated to the exploitation of agricultural, livestock and services activities in the Inantas Alto and Inantas Bajo of the Municipality of Yacuanquer. This indicates that rural association is not a practice in the aforementioned Villages. It is currently considered as a conception of State policy with multiple benefits for those who integrate rural associative organizations.

The Community Action Councils of the minor territorial units of the functional unit 4: El Vergel, San Pedro Obraje, Cochaverde and the Bolivar district of Tangua, work on projects of community interest. See Table 0.22

Table 0.68 Community Benefit Projects carried out by the Community Action Councils in minor territorial units of the FU 4

Minor Territorial Unit	Community Project by Community Action Councils
<b>Pilcuán</b>	Sewage Project, Association of Elders
<b>Pedregal</b>	None
<b>Inantas Bajo</b>	None
<b>Inantas Alto</b>	None
<b>Cocha Verde</b>	Chapel, Community room, Sports center repair

Minor Territorial Unit	Community Project by Community Action Councils
El Tablón Obraje	None
San Pedro Obraje	School improvement
Corazón de Jesús de Tangua Neighborhood	None
Fátima de Tangua Neighborhood	None
Bolívar de Tangua Neighborhood	Park remodeling
El Vergel	Milk processing & Ecotourism
La Buena Esperanza	None

Source (Géminis Consultores Ambientales S.A.S., 2016)

According to the primary information provided by the Municipality of Tangua, which is mentioned in the organizational political component of the present study in relation to the socioeconomic environment, there are productive organizations dedicated to the exploitation of agricultural, livestock and services activities in the Municipality of Tangua, from which an association belongs to the minor territorial unit El Vergel:

Village of El Vergel: Association of Farmer Users ANUC, dedicated to productive activities, created on October 28, 2010.

The following projects have been executed or are under execution in the minor territorial units of the Municipality of Tangua, the registration location corresponds to the executing entity:

Optimization and expansion of the sanitary sewage in the Village of Buena Esperanza, registered before the Government of Nariño on September 27, 2013.

Optimization of the aqueduct system for the Village of Buena Esperanza from the Municipality of Tangua, registered before the Mayor's Office on November 7, 2013.

Relationship with the Municipal Development Plan and the project.

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The rural housing construction project of the Inantas Bajo minor territorial unit, is related to the Development Plan of Yacuanquer 2016 -2019, in the strategic matrix of the housing sector, Housing Program for a dignified life, in order to reduce the qualitative and quantitative deficit of housing, there is a target of 350 residential units.

In the Development Plan of Tangua 2016-2019, in the program entitled as Drinking Water and Basic Sanitation, which aims to improve the coverage and quality of drinking water and sanitation services, includes the optimization of the Buena Esperanza multi-village aqueduct. The same program includes are the linear meters of expansion of the rural sewerage network and populated centers; which also includes the project for optimization and expansion of the sanitary sewerage in the minor territorial unit of Buena Esperanza.

The communication with the Department of Planning of the Municipality of Tangua will allow to learn about the places where these projects will be carried out, within the framework of national, regional and municipal development plans. In order to prevent overlapping with the Rumichaca - Pasto dual roadway construction project, or for the case of improving the coverage and quality of drinking water services, a coordination of the works is required, so the execution of such projects in the intervention area will be optimized.

In the program “For the sake of our countryside, join to the development and dignity of our farmers”, which has subprograms to foster partnership, entrepreneurship and productive chaining in the rural sector, will succeed in strengthening the established associations such as Association Nuevo Porvenir, Progresar Cebadal, Sembrando Vida, ANUC, as well as providing training related to entrepreneurship or partnership. There is a direct relationship with the Program called Support to institutional management capacity, formulated from the socioeconomic conditions of the area of influence, in which education needs and productive project initiatives will be identified in order to seek articulation with Institutions that contribute to their execution and/or to strengthen them, benefiting the population that receives an impact on their economic activities mainly.

In the impacts workshop carried out with the communities of the minor territorial units belonging to the functional unit 4, the following results stand out; this will help to perceive the expectations of the people in relation to the dual roadway project

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Rumichaca - Pasto and the situations when the road will contribute in the trend for the development of their Villages:

Generation of employment: El Pedregal, Inantas Bajo, Inantas Alto, Cochaverde, El Tablón Obraje, San Pedro Obraje, the neighborhoods Bolivar, Corazón de Jesús and Fátima de Tangua, El Vergel, Buena Esperanza

Development and regional recognition: El Pedregal, El Tablón Obraje, the neighborhoods Bolivar, Corazón de Jesús and Fátima de Tangua.

Improvement in quality of life: El Pedregal, Inantas Alto, Buena Esperanza

Tourism promotion: El Pedregal, El Vergel, Buena Esperanza

Incorporation of new businesses: Inantas Alto

Convenience to transport agricultural products and commercialize them: Inantas Bajo, Inantas Alto, the Obraje Plank, San Pedro Obraje.

The community from most of the minor territorial units associate the construction of the double roadway with the generation of employment, reflected not only by the people contracted to execute the project, but also by the possibilities of setting up companies that can provide a service to the Road Concessionaire Unión del Sur and other road projects in the region, such as road maintenance companies, which carry out drilling, ditch cleaning and transit signaling, among others. The constitution of road maintenance companies would generate work for a long term for the communities in the area of influence of the project.

In addition, to the convenience of transporting agricultural products and commercialize them, it is also highlighted, the improvement in the quality of life, by the number of minor territorial units that determined these as positive impacts related to the construction of the double roadway.

On the other hand, according to what is described in section 5.1.4 abiotic medium on soils and land use: The study of the current use of soils entails the interaction between the vegetation cover, and the different human activities that are carried out on this

resource, constitutes fundamental elements to be aware of the present situation and to evaluate, in time, the transformations that have been carried out and will continue to be carried, both in the natural and cultural vegetation, product of the occupation of the territory dynamics, the evolution of the production system, population growth, development policies and strategies and global natural changes, among others.

According to chapter 8 of the environmental evaluation, the implementation of the road project involves changes in land use, through the permanent intervention of vegetation coverages such as pastures for livestock, agricultural mosaics, among others. The same way, the temporary infrastructure associated during construction will affect the change of use.

On the other hand, the current predominant land use is related to the agricultural and livestock sectors, which can be transformed due to the development of productive chains, including the establishment of a free zone in El Pedregal - Catambuco section.

#### Functional Unit 5.1

The Community Action Councils of the minor territorial units of the FU 5.1 El Cebadal, El Tambor, La Palizada, Huertecillas and Catambuco work on projects of community interest. See Table 0.23

Table 0.69 Community Benefit Projects carried out by the Community Action Councils in the FU 5.1

Minor territorial Unit	Community Action Council Project
El Cebadal	Aqueduct
Chávez	None
El Tambor	Inter-village Aqueduct optimization
El Páramo	None
La Palizada	Aqueduct
Marqueza Bajo	None

<b>Los Ajos</b>	None
<b>Marqueza alto</b>	None
<b>Gualmatán Alto</b>	None
<b>Vocacional</b>	None
<b>Cubijan</b>	None
<b>La Merced</b>	None
<b>San José de Catambuco</b>	None
<b>Catambuco</b>	Turistic Project-Catambuco and sponsoring of patronal feasts
<b>Huertecillas</b>	Infrastructure (court-illumination)

Source (Géminis Consultores Ambientales S.A.S., 2016)

According to the primary information provided by the Mayor's Office of Tangua, which is mentioned in the organizational political component of this study of the socioeconomic environment, productive organizations are registered, dedicated to the exploitation of agricultural, livestock and services activities in the Municipality of Tangua, from which the following four associations belong to the Villages of La Palizada, El Cebadal and Los Ajos:

Village of La Palizada: Association Nuevo Porvenir, dedicated to productive activities, started its operations on September 22, 2014.

Village of El Cebadal: Progresar Cebadal APROCEB, dedicated to productive activities, created on September 2, 2014.

Village of Los Ajos: Tejiendo Vida, dedicated to productive activities, created on September 3, 2010.

The following projects have been executed or are under execution in the minor territorial units of the Municipality of Tangua, the registration location corresponds to the executing entity:



Optimization of the aqueduct system for the Villages of Los Ajos, El Tambor, El Cebadal from the Municipality of Tangua, registered before the Mayor’s Office on November 7, 2013.

Relationship with the Municipal Development Plan and the project.

In the Development Plan of Tangua 2016-2019, in the program known as Drinking Water and Basic Sanitation, which aims to improve the coverage and quality of drinking water and sanitation services, includes the optimization of the multi-village aqueduct Tambor, Los Ajos, El Cebadal.

In the program “for the sake of our countryside, join the development and dignity of our farmers”, which includes subprograms to foster partnership, entrepreneurship and productive chains in the rural sector, which will strengthen partnerships such as the Associations Nuevo Porvenir, Progresar Cebadal, Sembrando Vida, ANUC, as well as to provide training related to entrepreneurship or partnership.

The communication with the Department of Planning of the Municipality of Tangua will allow to learn about the places where these projects will be carried out, within the framework of national, regional and municipal development plans. In order to prevent overlapping with the Rumichaca - Pasto dual roadway construction project, or for the case of improving the coverage and quality of drinking water services, a coordination of the works is required, so the execution of such projects in the intervention area will be optimized.

In the Program for a sustainable, agroecological and equitable rurality, which aims to improve agricultural productivity as a foundation of sovereignty and food security in the rural population of the Municipality, includes as one of its products entrepreneurship projects related to consolidated rural tourism.

Rural tourism is an opportunity for the 17 townships of the Municipality of Pasto, such as Catambuco and Gualmatán, which in turn are some minor territorial units of the project; taking advantage of the landscape beauty and the gastronomic knowledge, to generate income for the communities.

Magic towns is related to an opportunity to fine-tune mechanisms and channels of expression associated to the identity of each town, in order to integrate them into a cultural, artisan and gastronomic offer.

In the Township of Gualmatán there are located the Villages of Huertecillas, Vocacional and Gualmatán Alto. The main attraction of the village of Huertecillas are the landscapes which attract many visitors, this has been an opportunity to integrate the Village in the project of magical towns. In the minor territorial unit of Vocational we can find beautiful landscapes which are usually visited by photography lovers, that is why it becomes an opportunity to integrate the Village in the project of magical villages.

“In the village of Gualmatán Alto, its main tourist attraction is the Cave of the Virgin of Lourdes, which is located 800 meters from the center of the township settlement, there is a feast celebrated on February 11 of each year. In this Cave, used to live a friar who died in 2005, his name was Luis Felipe Gómez, and he dedicated himself to encourage religion in the township, to celebrate the festivities of the Virgin of Lourdes, and the corresponding religious acts. This place keeps the fraile’s robes and rosary, and it is also a place visited frequently by the inhabitants of the region. A beautiful garden with roses, frailejons and swans decorate the beautiful cave.” (culturapasto, 2001).

Due to the above, the village of Gualmatán Alto has a tourist attraction, which also stands out the Township of Gualmatán.

In the Township of Catambuco in which the Villages La Merced, Cubiján, San José de Catambuco and the town center of Catambuco, are found the following aspects are highlighted:

In Catambuco, the main tourist attraction is the Basilica of Our Lady of Guadalupe, located in the main square of the town center of Catambuco, which is visited by people from the region and other parts of Colombia. See Image 0.3



Image 0.120 Basilica of Our Lady of Guadalupe in the minor Territorial unit of Catambuco

Source [www.google.com.co/search?q=foto+basilica+de+guadalupe+en+Catambuco](http://www.google.com.co/search?q=foto+basilica+de+guadalupe+en+Catambuco)

The gastronomy also delights all the inhabitants and visitors that arrive to the district of Catambuco, offering the typical dish of the region: Roasted guinea pig and the pasto fried, accompanied with the delicious potato from Pasto and chili peanut.

In Cubiján, the chapel of the same name was built by its inhabitants, it is a place visited by many drivers who make their way through this sector. Another attraction is the trails of the black lagoon in which visitors can enjoy the resonance of flora and fauna.

The minor territorial unit of La Merced is characterized by the spectacular landscapes that surround it.

“In the village of San José de Catambuco is located the Chapel of San José that was built by the community in 1993, in the upper part of the chapel visitors can observe the figure of Saint Joseph, which is a very important saint for its inhabitants.” (Timarán, 2001)

The minor territorial units of the project that belong to the Municipality of Pasto have tourist potential, which inhabitants have already begun to take advantage from, like in

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the case of the Village of Catambuco; According with the tourism development plan of the region, the Municipality and their development trends.

The Municipality of Pasto has the highest number of projects managed, which are referenced in the organizational political component of this study of the socioeconomic environment. However, for the minor territorial units of the project's area of influence, no progress has been made in this matter, which indicates that in order to be articulated with the municipal, regional and national development plans, progress must be made in the creation and strengthening of productive associations capable of formulating and managing projects according with the potential and productive traditions of the minor territorial units.

In the impact workshop carried out with the communities of the minor territorial units belonging to Functional Unit 5.1, the following results stand out, these will help to perceive the expectations of the people in relation to the Rumichaca - Pasto dual roadway project and the instances when the road will contribute to the development of their Villages:

Generation of employment: Chavez, El Tambor, El Páramo, La Palizada, Los Ajos, Marqueza alto, Gualmatán alto, Huertecillas, Cubiján, La Merced, San José de Catambuco, Catambuco.

Higher trade of products: El Cebadal, Chávez, El Tambor, El Páramo, La Palizada, Los Ajos, Marqueza alto, Gualmatán Alto, Huertecillas, Cubiján, La Merced

National Connection: El Tambor

Generation of projects and royalties: Chávez

Business Opportunities: Huertecillas

Promotion of tourism and ecotourism: El Cebadal, Chávez, Marqueza Alto, Gualmatán Alto, San José de Catambuco.

Strengthening of the rural economy: Gualmatán Alto

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The community of most of the minor territorial units associate the construction of the double roadway with the generation of employment.

In addition, it is worth mentioning the improvement on trade of products and the promotion of tourism - ecotourism, by the number of minor territorial units that determined these as positive impacts of the construction of the double roadway.

On the other hand, according to what is described in section 5.1.4 abiotic medium on soils and land use: The study of the current use of soils entails the interaction between the vegetation cover, and the different human activities that are carried out on this resource, constitutes fundamental elements to be aware of the present situation and to evaluate, in time, the transformations that have been carried out and will continue to be carried, both in the natural and cultural vegetation, product of the occupation of the territory dynamics, the evolution of the production system, population growth, development policies and strategies and global natural changes, among others.

On the other hand, the current predominant land use is the agricultural and livestock sector, which can be transformed due to the development of productive chains, including the establishment of a free zone in El Pedregal - Catambuco section.

### 5.3.9 Information about the population to be compensated

As a consequence of the development of the Rumichaca - Pasto Road project, Pedregal - Catambuco section, there is no need to perform population resettlement processes, therefore the compensation process will be implemented according with Resolution 545 of 2008 of the National Concessions Institute, now National Infrastructure Agency (ANI) because the project will affect private property. For this purpose, social and land management processes will be carried out, including the approach to the population, the purchase of land and the implementation of the respective social management measures; With the purpose of guaranteeing equal social units and/or better living conditions, providing social support during the process of adaptation and appropriation of the new housing place or development of the productive activity, especially in relation to cases where there are ranges of high and medium vulnerability that according to the aforementioned resolution is understood as “low capacity of the social unit to confront, assimilate or manage the alteration of living conditions related to aspects such as the loss of housing, affectation of basic social services, the suspension of

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productive activities, among others, according to the analysis of variables such as root, management capacity, adaptability, total or partial allocation of income, etc.”

In relation to the above, it is of vital importance for the proper functioning and efficient execution of the project in social terms to know the owners or holders of the properties, constructions or states, to intervene directly with the works to be done, to establish channels of communication and agreements between owners and executors of the project to be able to carry out a joint, friendly and legal work, carried out by the team of the partner tax area of the Road Concessionary Unión del Sur.

In relation to the above, it is of vital importance for the proper functioning and efficient execution of the project in social terms, to know the owners or holders of the properties, real estate or dwellings to intervene directly with the works to be carried out and establish channels of communication and agreements between owners and executors of the project to be able to carry out a joint, friendly and correctly legal work. In this context, before initiating work and fieldwork related to social characterization, the generalities of the project were socialized to the community in the direct area of influence, continuing with the application of the exact survey sheet, in order to obtain information about the families and general characteristics of the houses that would be intervened during the execution of the project, the information provided dwelling by dwelling, such as the name of owner or holder, condition of land ownership, economic, social, educational, health, and organizational characteristics of said dwellings are recorded in the social-property records (Annex 5.3.9 a), among others.

Below, there is the distribution of social units to be compensated for each minor territorial unit of FU 4 and FU 5.1 composed by the municipalities of Imués, Yacuanquer, Tangua and Pasto. In this sense, it is pertinent to clarify that the possible population to compensate from the Municipality of Tangua is in the two functional units, which means, they are included in the Functional unit four (4) and Functional unit five (5) minor territorial units and in Functional Unit 5.1 Located in six (6) Territorial units. With these remarks, it was possible to identify the following:

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#### Functional Unit 4

In the municipalities of Imues and Yacuanquer the population to compensate is located in the rural sector, while in the Municipality of Tangua the population to be compensated is located in the rural and suburban sectors in 4 neighborhoods, as specific below:

Table 0.70 Social Units Distribution per FU 4

MUNICIPALITY	NEIGHBORHOOD/VILLAGE	POPULATION TO BE COMPENSATED	TOTAL % UF4
IMUES	Village of EL PEDREGAL	67	29,65
	SOCIAL UNITS TOTAL	67	
YACUANQUER	Village of INANTAS BAJO	16	7,08
	SOCIAL UNITS TOTAL	16	
TANGUA	Village of TABLON OBRAJE	26	63,27
	Neighborhood of CORAZON DE JESUS	68	
	Neighborhood of VERGEL	1	
	Neighborhood of FATIMA	4	
	Neighborhood of BOLIVAR	44	
	SOCIAL UNITS TOTAL	143	
FUNCTIONAL UNIT TOTAL 4		226	100,00

Source: (Géminis Consultores Ambientales S.A.S, 2016)

The following figure shows that most of the population to be compensated for FU 4 is located in the Municipality of Tangua (63.27%), especially in the neighborhoods of Bolívar and Corazón de Jesús, followed by the Municipality of Imues, but all the social units are concentrated in the Village of El Pedregal, as it can be seen in Figure 0.3.

Therefore, these will be the minor territorial units where more land management processes should be implemented, emphasizing the constant accompaniment of transportation and adaptation process to the new habitat of the population to be compensated due to the construction works of the road project.

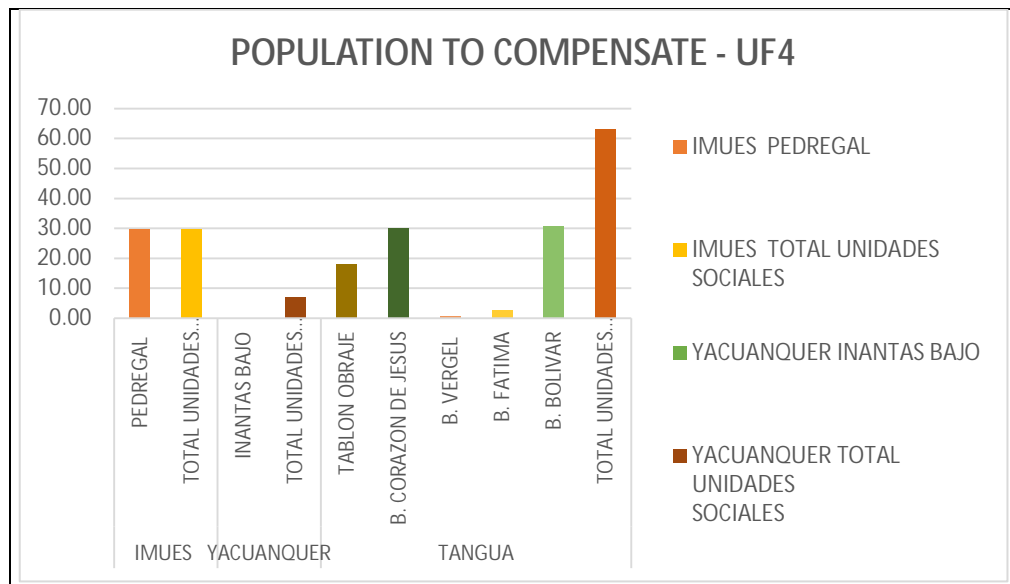


Figure 0.88 Percentage of Social Units to Compensate – UF4

Source: (Géminis Consultores Ambientales S.A.S, 2016)

Below, there is the type of land use to compensate, considering that residential use is predominant with 217 social units among the 226 of the total UF4, with some mixed-use units, meaning that the population combine residential and commercial use, as in the case of El Pedregal and Inantas Bajo, it is necessary to consider that El Pedregal is characterized by having an important concentration of commercial businesses along the road, but with the construction of the road only six family units will be physically affected.



Table 0.71 SOCIAL UNITS LAND USE

MUNICIPALITY	MINOR TERRITORIAL UNIT	COMMERCIAL/RESIDENTIAL	RESIDENTIAL	INHABITED
IMUES	PEDREGAL	6	61	67
YACUANQUER	INANTAS BAJO	3	13	16
TANGUA	TABLON OBRAJE	0	26	26
TANGUA	Neighborhood of CORAZÓN DE JESÚS	0	68	68
TANGUA	Neighborhood of VERGEL	0	1	1
TANGUA	Neighborhood of FÁTIMA	0	4	4
TANGUA	Neighborhood of BOLÍVAR	0	44	44
<b>TOTAL</b>		<b>9</b>	<b>217</b>	<b>226</b>

Source (Géminis Consultores Ambientales, S.A.S. 2016)

In relation to ownership, according to the information in the following graph, it was identified that: from the 226 social units to compensate 65.5% are equivalent to 48 social units that claimed to have owners, 11 are corresponding to 4.9% that claim to be holders, possibly correspond to improvements and 43 social units are equivalent to 19% that claim to be residents (tenants), the other interviewees did not provide information.

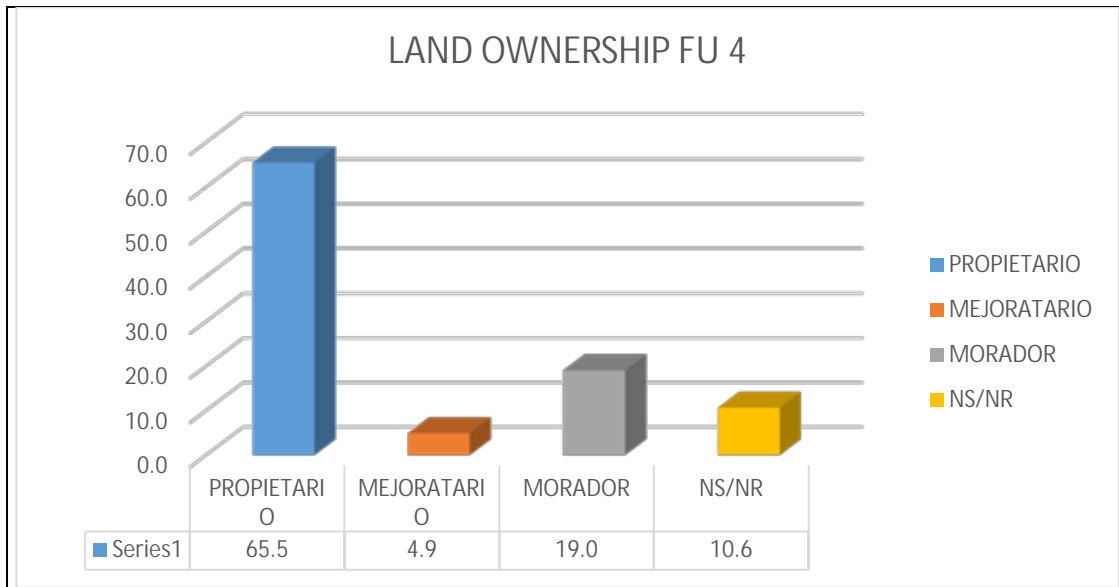


Figure 0.89 Porcentajes de tipo de unidades sociales  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

### Family Structure

Figure 0.5 Provides information about the family structures of the social units from the FU 4, concluding that in this context there are families from nuclear, extensive, single parent, single person and reconstituted types, mostly predominating with a 38.97% of the extended family type defined as the one composed by paternal figures, children and other members of the family, such as grandparents, parents, uncles, nephews among others; Likewise, 63 families represented the 29.58%, are nuclear type, meaning that it is composed by parents and children. The above allows to know the particularity of the familiar structures of the social units of El Pedregal - Catambuco section of the Rumichaca - Pasto Road Project, a reality that must be taken into account in the process regarding relocation and adaptation to the new habitat by the construction works of the road project, In order to provide constant accompaniment, taking into account family relationships, roles, expectations and in general the family dynamics, mitigating this way, the possible conflicts that may appear with the relocation.

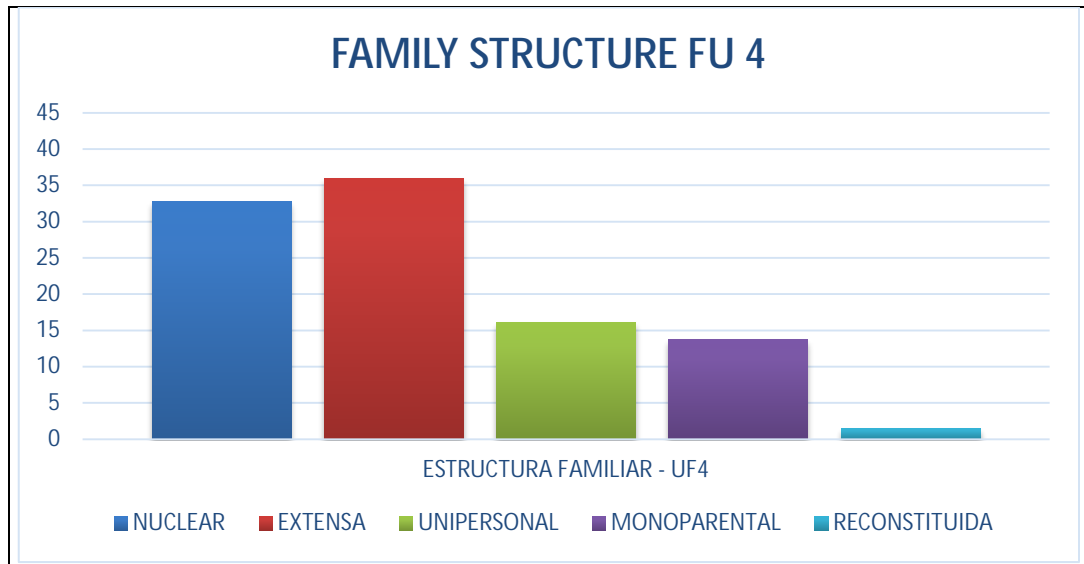


Figure 0.90 Families structure percentage in social units FU 4  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

#### Preferred places for relocation

According to the survey of information related land ownership records, the following table is presented, it allows to indicate the preference places for relocation for family social units in the Functional unit 4.

Table 0.72 Preferred relocation place

RELOCATION PLACE - FU4						
MUNICIPALITY	IN THE SAME PLOT	IN THE SAME VILLAGE	DIFFERENT VILLAGE IN THE MUNICIPALITY	DIFFERENT MUNICIPALITY	DK/NA	TOTAL
IMUES	14	17	1	6	19	213
YACUANQUER	4	2	1	1	1	
TANGUA	33	59	7	8	40	
PARCIAL TOTAL	51	78	9	15	60	

%	23,94	36,62	4,23	7,04	28,17	100
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Source (Géminis Consultores Ambientales, S.A.S. 2016)

The option “On the same Village” has a large number of social units, which makes it possible to deduce that they are rooted in their Villages since the people on which the socio-economic and land property survey sheet were applied, repeatedly indicated about their desire to continue living in the same Village, due to their traditions and habits of life. Becoming, an important factor when determining the new place for relocation.

#### Functional Unit 5.1

According to the information obtained in the socioeconomic and property characterization of the population corresponding to the area of intervention of the road project, the following percentages of social units to compensate from the FU 5.1 were obtained.

Table 0.73 Social Units Distribution per FU 5.1

POPULATION TO COMPENSATE - UF5.1				
MUNICIPALITY	NEIGHBORHOOD/VILLAGE	POPULATION TO COMPENSATE	%	TOTAL % UF5
<b>TANGUA</b>	CEBADAL	40	31,75	58,06
	TAMBOR	22	17,46	
	PARAMO	4	3,17	
	MARQUEZA BAJO	46	36,51	
	LOS AJOS	1	0,79	
	MARQUEZA ALTO	13	10,32	
	TOTAL UNITS SOCIALES	126	100,00	
<b>PASTO</b>	CUBIJAN BAJO	49	53,85	41,94
	LA MERCED	40	43,96	
	CATAMBUCO	2	2,20	
	TOTAL UNITS	91	100,00	

	<b>SOCIALES</b>		
<b>FUNCTIONAL UNIT 5.1 TOTAL</b>		<b>217</b>	<b>100,00</b>

Source (Géminis Consultores Ambientales, S.A.S. 2016)

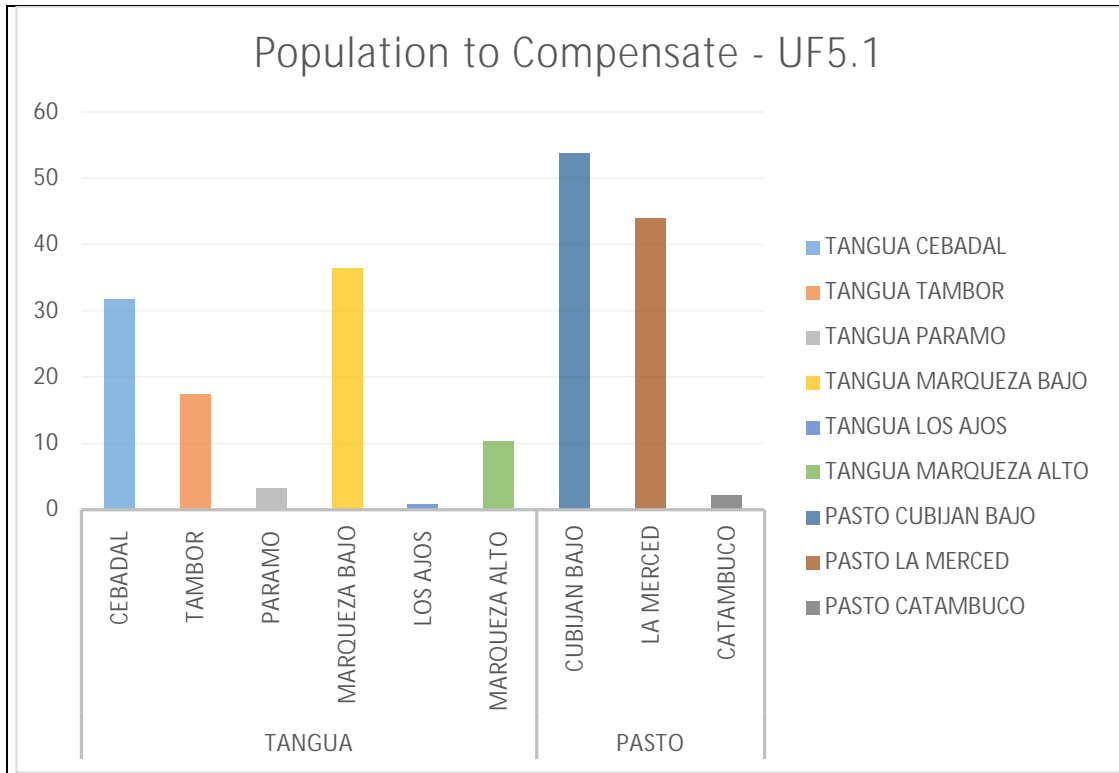


Figure 0.91 Percentage of Social Units to Compensate – UF5.1

Source (Géminis Consultores Ambientales, S.A.S. 2016)

The previous figure shows that in Functional Unit 5.1 the largest population to be compensated is mainly located in the Municipality of Tangua with a total of 126 units (58.06%). Therefore, it is evident that Tangua is the Municipality where it is necessary to implement a greater number of processes related to property management, focusing on the constant accompaniment of relocation and adaptation process to the new habitat of the population to compensate due to the construction works of the road project.

Regarding the type of land use, table 5.3.82 shows that 100% of the dwellings are inhabited and their predominant use is housing, with a minimum of housing spaces



destined to mixed activities, which means that they are destined for residence and also commercial purposes.

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Table 0.74 PREFERRED TYPE OF USE ACCORDING TO THE SOCIAL UNITS

MUNICIPALITY	MINOR TERRITORIAL UNIT	COMMERCIAL/RESIDENTIAL	RESIDENTIAL	INHABITED
PASTO	CATAMBUCO	0	2	2
PASTO	CUBIJAN BAJO	0	43	43
PASTO	LA MERCED	2	44	44
TANGUA	LOS AJOS	0	1	1
TANGUA	MARQUEZA ALTO	1	12	13
TANGUA	MARQUEZA BAJO	0	46	46
TANGUA	CEBADAL	4	36	42
TANGUA	TAMBOR	0	22	22
TANGUA	PARAMO	0	4	4
TOTAL		7	210	217

Source (Géminis Consultores Ambientales, S.A.S. 2016)

Regarding ownership, according to the information in the following figure, it was identified that from the total of the social units to compensate, 82.4% reported to be the owners, 5.2% reported to be improvers and 10.7% residents (tenants), and 1.7% of those interviewed did not provide information.

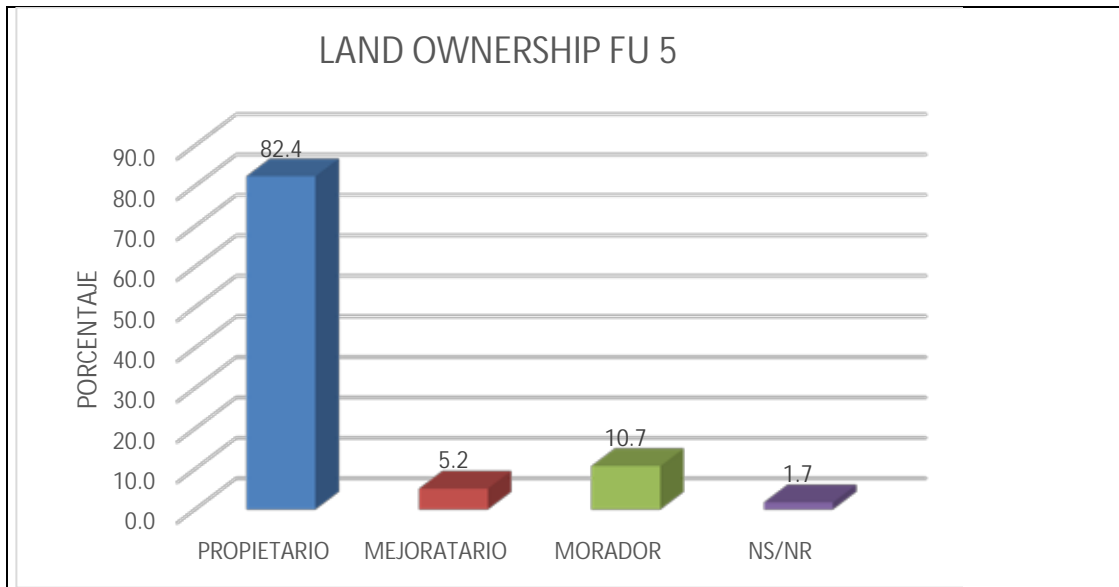


Figure 0.92 TYPE OF SOCIAL UNITS PERCENTAGE  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

### Family structure

The graph below gives information about the family structure in the social units that have residential use, concluding that in this context there are the following family types: Nuclear, extended, single-parent, single-person and reconstituted, With a predominance of 38.57% for Nuclear families, which means that it is composed by parents and children, and in second place there are the extended families (families composed by parents, children, grandchildren, grandparents, uncles, cousins, etc.) with a 38.10%.

The above allows to identify a particularity in relation to the familiar structures in the social units of El Pedregal-Catambuco section of the Rumichaca-Pasto Road Project, a reality that must be taken into account in the process of relocation and adaptation to the new habitat as a result of the construction of the Road project, so it is important to provide constant support, taking into account family relationships, roles, expectations and in general the family dynamics, thereby mitigating potential conflicts and family decomposition.



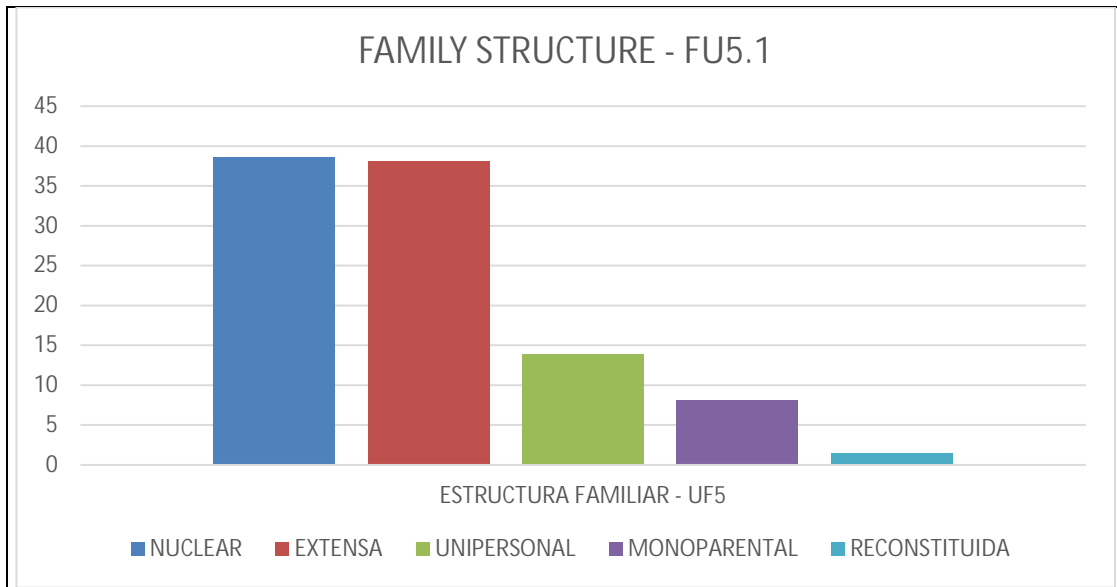


Figure 0.93 Family Structure Percentage of Social Units FU 5.1  
Source (Géminis Consultores Ambientales, S.A.S. 2016)

#### Preferred places of Relocation

According to the collection of information regarding socioeconomic and property registers, the following table is presented, which makes it possible to indicate the number of social units and the preferred relocation places because of a possible transfer due to the road project:

Table 0.75 Social Units ration with preferred relocation places

RELOCATION PLACE - UF5.1						
	IN THE SAME PLOT	IN THE SAME VILLAGE	A DIFFERENT VILLAGE IN THE MUNICIPALITY	DIFFERENT MUNICIPALITY	DK /D A	TO T A L
TANGU A	34	50	8	6	19	210
PASTO	13	42	14	4	20	
TOTAL PARCIA	47	92	22	10	39	

L						
%	22,38	43,81	10,48	4,76	18,57	10,00

Source (Géminis Consultores Ambientales, S.A.S. 2016)

The population to be compensated from the FU 5.1, is the option “In the same village”, has a high number of social units because they are rooted to their present place of residence, since the people who received the socioeconomic survey and property registry repeatedly referenced their nonconformity to change their place of residence and their desire to continue living on the same Village, with their traditions and habits of life. Identifying a factor that may possible trigger nonconformities as it would hinder the processes of adaptability in social units that must be compensated.

It should be clarified that the systematized information of the survey sheet was the one provided by the interviewee therefore without being required to verify what was stated, however it should be confirmed at the moment of moving forward with the respective procedure of the property partner.

It is also important to mention that due to the idiosyncrasy of the population of the Department of Nariño, due to the precaution of approaching a person outside of their daily lives and due to the availability of time, they preferred to respond to the questionnaire of the socio-economic and property survey sheet outside their home, as evidenced in the photographs presented.



Image.121 Socio-economic and property survey sheet application in the Municipality of Tangua

Coordinates E 964327,826 - N 612881,483

Source (Géminis Consultores Ambientales, S.A.S. 2016)



Image 122 Socio-economic and property survey sheet application in the Village of Tambor from Municipality of Tangua

Coordinates E 968133,482 - N 616911,15

Source (Géminis Consultores Ambientales, S.A.S. 2016)

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Image 0 .123 Socio-economic and property survey sheet application in the Village of Tambor from the Municipality of Tangua  
 Coordinates E 968030,742 - N 616798,708  
 Source (Géminis Consultores Ambientales, S.A.S. 2016)



Image 0.124 Socio-economic and property survey sheet application in the Village of Marqueza Bajo from Municipality of Tangua

Coordinates: N 618028,455834632 E 970000,408413126

Source (Géminis Consultores Ambientales, S.A.S. 2016)



Image 0.125 Socio-economic and property survey sheet application in the Village of La Merced from the Municipality of Pasto

Coordinates: N 618835,748999836 E 974016,907273387

Source (Géminis Consultores Ambientales, S.A.S. 2016)



Image 0.126 Socio-economic and property survey sheet application in the Village of Cubijan Bajo from the Municipality of Pasto

Coordinates: N 618305,49281316 E 973234,770210865

Source (Géminis Consultores Ambientales, S.A.S. 2016)

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