

ENVIRONMENTAL IMPACT STUDY FOR THE RUMICHACA – PASTO DUAL CARRIAGEWAY
ROAD PROJECT PEDREGAL – CATAMBUCO SECTION, UF.4 – 5.1, CONCESSION CONTRACT
UNDER SCHEME APP NO. 15 OF 2015



Géminis Consultores Ambientales SAS



Chapter 11. PLANS AND PROGRAMS. 11.1.2.3. SOCIOECONOMIC PSM

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TABLE OF CONTENTS

11.1.2.3. SOCIOECONOMIC PMS 2

 11.1.2.3.1. Goals..... 2

 11.1.2.3.2. Plan structure..... 2

 Follow-up and monitoring programs..... 2

 Follow-up and monitor the socioeconomic environment trend..... 11

INDEX OF TABLES

Table 11.1.2.1: Socioeconomic environment program structure..... 4

Table 11.1.2.2: Follow-up user attention program**Error! Bookmark not defined.**

Table 11.1.2.3: Follow-up education and training for personnel involved in the project program.....**Error! Bookmark not defined.**

Table 11.1.2.4: Follow-up local labor contracting program**Error! Bookmark not defined.**

Table 11.1.2.5: Follow-up information and community participation program..... 7

Table 11.1.2.6: Follow-up institutional management capacity support..... 8

Table 11.1.2.7: Follow-up training, education and awareness to the community surrounding the project program..... 9

Table 11.1.2.8: Follow-up road culture program 9

Table 11.1.2.9: Follow-up the socio land management support program t..... 10

11. PLANS AND PROGRAMS

11.1. ENVIRONMENTAL MANAGEMENT PLAN

11.1.2. Follow-up and Monitoring Plan (PMS)

11.1.2.3. SOCIOECONOMIC PMS

The follow-up and monitoring plan is made up by the necessary programs to evaluate the effectiveness of management measures planned to handle the impacts generated by the implementation of the Rumichaca - Pasto Dual Carriageway Road Project, Pedregal - Catambuco Section, Concession Contracted Under Contract Scheme APP No. 15 2015

The evaluation of an Environmental Management Plan is an ongoing process of evaluation, coordination and monitoring of the effectiveness of the actions planned and conducted. This evaluation will have the continued support of the socio-environmental related team in the Environmental Management Plan.

This document involves mainly affected environmental environments according to the impact analysis and evaluation of the actual effects produced as a result of the project. The intent of executing this plan is to identify the percentage of compliance, delays that arise and identify the difficulties at every stage of the project.

11.1.2.3.1. Goals

- Review that all existing territorial units in the two-way road are taken into account in the compensation processes for intervention during construction of the project.
- Allow evaluation of programs, in compliance with provisions of the management plan.

11.1.2.3.2. Plan structure

The follow-up and monitoring plan for this study is divided as follows:

- Follow-up and monitoring programs.
- Follow-up and monitor environment trends.

	ENVIRONMENTAL IMPACT STUDY	CSH-4-AM-AM-EIA2-GG-0013-7
		March 2017
		Page 2

Follow-up and monitoring programs

Measures to implement in the environmental management plan need to be monitored to verify their compliance and the applicable environmental regulations in force; for such end this follow-up and monitoring program considers the most relevant aspects in this regard for the socioeconomic environment.

Follows the description of issues addressed in the content of the environmental management programs for the Project.

- **Actions to be taken:** this refers to actions taking place during project implementation to meet the objective and goals of the program.
- **Implementation schedule:** this specifies development of actions to be executed during project duration.
- **Implementation steps:** is the time specified in the duration of the project where management measures developed by the program will be implemented.
- **Program identification:** corresponds to the consecutive code expressed with letters and numbers that identifies in a simplified manner each subprogram.
- **Follow-up and monitoring indicators:** this includes defining indicators for tracking and monitoring the implementation of activities previously detailed in the program description, the frequency of the evaluation and recording of compliance.
- **Implementation site:** identifies the site or sites where the measure will be implemented.
- **Participatory mechanisms and strategies:** points out strategies from which the community will be involved in developing management measures.
- **Program and subprogram name:** this corresponds to the denomination of each project, established according to the component to which it refers.
- **Objectives:** Outlines the results expected, obtained upon completion of implementing the actions that are contemplated within the program.
- **Target population:** this is the population that will be benefited with the development of measures that will allow reducing negative impacts.
- **Type of measures to run:** this corresponds to the classification of the measures that will allow reducing negative and enhancing positive impacts during project development, which can be of a prevention, correction, mitigation and / or compensation nature.
- **Personnel required:** this refers to the human resources necessary to implement the activities contained in each program.
- **Responsible for implementation:** this registers organizations, companies or positions within the company on which rests the responsibility for the implementation of programs.

	ENVIRONMENTAL IMPACT STUDY	CSH-4-AM-AM-EIA2-GG-0013-7
		March 2017
		Page 3

Visual inspections will be used for tracking and monitoring each proposed activity where photographic or film records can be obtained to demonstrate the veracity of each activity.

The supports (meetings, socializations) and records are a tool to assess over time the activities and works for each component, power supplies to measure indicators should be reviewed since this allows taking measures or relevant adjustments to the management plans to provide preventive, corrective, mitigation or compensation responses to project impacts.

Table 11.1.2.3.1, lists the follow-up sheets regarding the control and verification environmental management plan, which will be implemented in project execution.

Table 11.1.2.3.1. Socioeconomic environment program structure

PROGRAM	CODE	PROYECT
User attention	SMSC-1	Follow-up and monitor customer service
Education and training to personnel involved in the project	SMSC-2	Follow-up and monitor the education and training program for personnel involved in the project
Labor contracting	SMSC-3	Follow-up and monitor the labor contracting program
Information and community participation	SMSC-4	Follow-up and monitor information and community participation program
Institutional management capacity support	SMSC-5	Follow-up and monitor institutional management capacity support program
Training, education and awareness to the community surrounding the project	SMSC-6	Follow-up and monitor the training, education and awareness to the community surrounding the project program
Road culture	SMSC-7	Follow-up and monitor the road culture program
Land support management	SMSC-8	Follow-up and monitor the land support management program
Follow-up and monitor the trend	SMTMS	Follow-up and monitor the trend of the components of the socioeconomic environment

Source: Gemini Environmental Consultants SAS, 2016

Follows the charts of each follow-up program for the socioeconomic environment:

	ENVIRONMENTAL IMPACT STUDY	CSH-4-AM-AM-EIA2-GG-0013-7
		March 2017
		Page 4

- Table 11.1.2.3.2. Follow-up user attention program
- Table 11.1.2.3.3. Follow-up education and training of project involved personnel program
- Table 11.1.2.3.4. Follow-up local labor contracting program
- Table 11.1.2.3.5. Follow-up information and community participation program
- Table 11.1.2.3.6. Follow-up institutional management capacity support
- Table 11.1.2.3.7. Follow-up training, education and awareness to the community surrounding the project program
- Table 11.1.2.3.8. Follow-up road culture program
- Table 11.1.2.3.9. Follow-up socio-land management support program.

Table 11.1.2.3.2. Follow-up user attention program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 1	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	User attention
OBJECTIVE	
Evaluate the mechanism used for receiving and timely handling petitions, complaints, claims and information requests by the community or authorities	
ACTIONS TO BE TAKEN	
<ul style="list-style-type: none"> - To verify that User Attention Offices are installed and operating in the Area of Influence - To verify that in the user attention offices the forms recording and addressing the concerns, complaints, claims and requests from stakeholders who go to the offices are filled out. To also verify that each record contains at least the following information: date, time, name, identity card, place of residence of the person and reason for coming to the office (concerns, complaints, claims or requests). - Follow-up the reception, attention and response given to petitions, complaints, claims and requests (PQRS) developed by city authorities and the community. - The information and user attention mechanism for citizen participation will be verified. - To verify that each request is submitted and communicated to the area of interest - Response times will be kept to ensure meeting response or follow-up timing. 	
CRITERIA	
Standardize collecting processes of requests made by the community and follow-up to solve and answer the requests, as these are of vital importance in project development to ensure continuous improvement and correct implementation of work activities.	
FREQUENCY	
The collection instruments of petitions and complaints will be used to evaluate the strategies established to resolve petitions filed; follow-up will be on a quarterly basis	

where proper handling and timely response will be verified.
JUSTIFICATION
The set of institutional mechanisms that allow and ensure citizens an effective participation in follow-up and social control of the road project is an important development tool under the project.

Table 11.1.2.3.3. Follow-up education and training for personnel involved in the project program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 2	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	Education and training of personnel involved in the project
OBJECTIVE	
Evaluate the comprehensive training plan aimed at work site personnel. Follow-up industrial safety and occupational health	
ACTIONS TO BE TAKEN	
<ul style="list-style-type: none"> - Assess and validate the content of the training to meet the requirements, restrictions and responsibilities of the project. - Assess the content of industrial safety and occupational health 	
MEASUREMENT CRITERIA	
Development of skills in contracted personnel allows standardizing concepts and mechanisms to develop specific tasks, which in turn provides the tools for decision-making.	
MEASUREMENT FREQUENCY	
Training will be evaluated every six months, with follow-up reflected in the training records and minutes.	
INDICATOR RATIONALE REPRESENTATIVENESS	
The lack of mechanisms to recognize and value the skills of workers throughout their experience prevents standardized processes leading to excellence, reason why education and training opportunities will be given to thus achieve better processes and lower contingent incidents or accidents.	

Table 11.1.2.3.4. Follow-up local labor contracting program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 3	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	Local labor contracting
OBJECTIVE	
Ensure participation of the community of the area of influence when contracting skilled and unskilled labor.	
ACTIONS TO BE TAKEN	
Needs and profiles of local labor	
<ul style="list-style-type: none"> - Verify that the needs of local labor for each activity were established by the company and contractors, once the company obtains its environmental license and decides to commence activities. - Confirm that labor needs that can be covered by local personnel are socialized with the community. This socialization will be done before the commencing the construction phase, so that community inhabitants will have time to train in semi-skilled and skilled trades. 	
Selection process of local labor	
<ul style="list-style-type: none"> - Monitor the transparency of call processes and recruitment of personnel from the communities in the area of influence. - Verify that dissemination processes involve the whole community. - Ensure that personnel are trained through agreements made with SENA. 	
MEASUREMENT CRITERIA	
It is important to encourage participation of inhabitants to have a job opportunity for both the community and the Concessionary that seeks to fulfill its social responsibility purpose	
FREQUENCY OF MEASUREMENT	
Through filmic and photographic records and minutes of attendance and meetings, the effectiveness of the measures will be measured biannually in order to identify weaknesses in contracting processes and to provide solutions.	
INDICATOR RATIONALE REPRESENTATIVENESS	
Contracting local labor for the project is critical towards providing opportunities in regions where formal employment is minimal, therefore development of such projects bring tangible positive impacts for the community such as generating formal employment for both skilled and unskilled labor, although temporary, it represents a benefit to the population.	

Table 11.1.2.3.5. Follow-up information and community participation program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 4	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	Follow-up information and community participation program
OBJECTIVE	

Evaluate the effectiveness of proposed information and communications system, which should encourage ongoing interaction among stakeholders and contribute to the good image of the company.
ACTIONS TO BE TAKEN
<ul style="list-style-type: none"> - Verify that socialization meetings with the community on commencement, progress and end of the works have been held. - Verify and validate call mechanisms that guarantee the presence of communities, institutions and local authorities in socialization meetings.
MEASUREMENT CRITERIA
Strengthen community and institutional information mechanisms that contribute to good management of project communication and interaction. The proposed activities have the competence to generate community participation and organization.
FREQUENCY OF MEASUREMENT
Information and communication mechanisms must be measured semi-annually based on records of actions taken.
INDICATOR RATIONALE REPRESENTATIVENESS
Information and communication strategies are a fundamental component for project socialization, its phases and its progress; so ensuring the participation of different actors is essential for everyone to have access to the information.

Table 11.1.2.3.6. Follow-up institutional management capacity support

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 5	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	Institutional management capacity support
OBJECTIVE	
Verify that the activities are aimed at promoting community participation and that the training provided to the community meets their expectations and needs. Evaluate the strategies to strengthen community organizations	
ACTIONS TO BE TAKEN	
<ul style="list-style-type: none"> - Evaluate participation of the municipal administration of the municipalities that are part of the area of influence of the project as well as the opinions of each stakeholder to ensure good communications. 	
CRITERIA	
Community participation and organization are indicators of area development processes in the perspective of management and goal achievement by the communities.	
FREQUENCY	
The measure of this program is given by the workshops and trainings conducted, this measurement will be made annually in order to verify assertiveness of the topics and the	

degree of responsiveness to community issues.

JUSTIFICATION

Modernizing intervention and social management processes are evident in the area with the need to improve processes and communication mechanisms; therefore strengthening community management is aimed at developing and facilitating the works and the efficiency of resource.

Table 11.1.2.3.7. Follow-up training, education and awareness to the community surrounding the project program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 6	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	Training, education and awareness to the community surrounding the project program
OBJECTIVE	
Assess the impact of ecological seminars and training to the community. Verify established agreements or alliances	
ACTIONS TO BE TAKEN	
The program should address basic environment aspects of the region and especially the Pedregal-Catambuco section, pollution of resources, stressing on compliance with the laws in each project stage.	
To assess:	
<ul style="list-style-type: none"> - Assertiveness of scope and teaching methodologies used in training workshops. - The impact of proposed ecological days to be developed during project implementation - The topics covered in each proposed phase, this can be done through minutes or attendance records. 	
MEASUREMENT CRITERIA	
Providing elements that favor construction of comprehensive education concepts is a transformation instrument for changing attitudes and behaviors of the community that allows potentiate active citizens and drivers of change.	
MEASUREMENT FREQUENCY	
Ecological days and workshops held should be evaluated semiannually in order to check progress, community participation and their impact in the community.	
INDICATOR RATIONALE REPRESENTATIVENESS	
The percentage of community participation in proposed activities is the basis for measuring the impact of the contents of the topics developed in the behaviors of the community in their daily activities and their relation to environmental protection.	

Table 11.1.2.3.8. Follow-up road culture program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 7	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT

Road culture	
OBJECTIVE	
Confirm that measures taken allow free and safe circulation for road users.	
ACTIONS TO BE TAKEN	
<ul style="list-style-type: none"> - Evaluate measures taken during development of the works to allow safe mobility. - Evaluate cultural awareness measures and their impact on the community. - Verify restitution of affected accesses. 	
CRITERIA	
The project involves developing international road communication, which means a large flow of vehicles and daily road use, reason why the plan is focused on the inhabitants neighboring the road and people who pass daily in any means of transport.	
FREQUENCY	
Measuring the effectiveness of the measures proposed will be done through established agreements and the information provided to the community; indicators will be measured every six months, at which point new measures will be established to achieve the objectives and compliance goals if necessary.	
JUSTIFICATION	
Loss ratio and accidents on the road is an important factor that has experienced a positive evolution reason why constant work on road safety awareness campaigns is necessary, to minimize the maximum number of occurring incidents and accidents.	

Table 11.1.2.3.9. Follow-up the socio land management support program

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 8	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
Follow-up socio land management support program	
OBJECTIVE	
Follow-up living conditions present in social units whose properties have been required by the project	
ACTIONS TO BE TAKEN	
Identify and verify follow-up of transferred social units, verifying compensation measures applied as stated in the regulations. Evaluate the conditions of social units in their new land, in order to ascertain whether the initial socioeconomic conditions were restored or improved.	
MEASUREMENT CRITERIA	
Provide support to compensated social units for land impairment during the process of adaptation and appropriation of new dwelling places or development of productive activity; it is vitally important to compensate for generated impacts, which is of the outmost importance when implementing these types of projects.	
FREQUENCY OF MEASUREMENT	
Based on monitoring forms and other information recording means, measure indicators that will be evaluated on a quarterly basis, which should show gradual progress.	

FOLLOW-UP SOCIOECONOMIC ENVIRONMENT PROGRAM	
SMSC - 8	SOCIO-ENVIRONMENTAL IMPACT MANAGEMENT
	Follow-up socio land management support program
INDICATOR RATIONALE REPRESENTATIVENESS	
The project involves purchasing of land reason why it is essential that affected homeowners are guaranteed due support during project implementation in an adaptation process and appropriation of new dwelling places in order to guarantee that the impacts are minimized.	

Follow-up and monitor the socioeconomic environment trend.

Table 11.1.2.3.10. describes the issues addressed in the content of the follow-up and monitor the socioeconomic trend of the project.

Table 11.1.2.3.10. Follow-up and monitor the socioeconomic environment trend

SMTMS – FOLLOW-JP AND MONITOR THE SOCIOECONOMIC TREND									
OBJECTIVE									
Approximate the degree of alteration of components in the socioeconomic environment									
ENVIRONMENTAL MONITORING COMPONENT									
Demographic	X	Economic	X	Spatial	X	Cultural	X	Political / org	X
LOCATION									
Area of influence of the Rumichaca - Pasto dual carriageway road project Pedregal – Catambuco section.									
MANAGEMENT MEASURES AFFECTING THE TREND									
<p>Designed programs respond to an action plan addressing possible impacts caused by construction activities on community infrastructure and on individual that are located in the radius of the project works. Therefore the proposed programs aim to influence the trend of the environment in each component of the socioeconomic environment; the impacts to be managed are developed in the PMA.</p> <p>Information and community participation Attention to PQRS Contracting local labor Education and training to personnel involved Support to institutional management capacity Training, education and awareness to the surrounding community Support to institutional management capacity Road culture</p> <p>Due to development of construction process activities, it is possible to generate direct effects on individual and community infrastructure in the construction related area. It is therefore important</p>									

SMTMS – FOLLOW-JP AND MONITOR THE SOCIOECONOMIC TREND

to collect detailed information that accounts for the state of infrastructure before resumption of activities, to allow having an initial benchmark against possible claims by the community or due to unexpected events that may directly affect infrastructure or equipment in the area.

PROCESS

Implementation of PMA programs are focused on preventing, mitigating or controlling potential impacts identified during project implementation; it is proposed to monitor these programs to verify the degree of impact on the identified impact.

To note that the factors that can lead to altering or modifying a social environment component are multi-causal, therefore what is evidenced in the environment goes beyond the possibilities of the measure, which must be understood as a contribution to managing the impact.

MONITORING FREQUENCY AND DURATION

Component	Follow-up and monitoring plan	Frequency	Duration (Annual for 3 years)					
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Economic	Development a card type instrument to measure the percentage of local labor hired and their contribution to social conditions of said workers.	Biannual	X	X	X			
Cultural	Determine the extent the main customs of AI inhabitants are changed.	Annual	X	X	X	X	X	
Demographic	Build an instrument to determine together with representative s of minor units changes	Annual	X	X	X	X	X	



SMTMS – FOLLOW-JP AND MONITOR THE SOCIOECONOMIC TREND								
	in population number.							
Spatial	Determine through pre-structured interviews with representatives of organizations providing public and social services, the change in coverage and quality of these services.	Annual	X	X	X	X		
Political / Org.	Determined through a satisfaction survey the degree of contribution of the training to institutional management to each municipal secretaries. Determine changes in the number of participants in social organizations.	Annual	X	X	X	X	X	
ANALYSIS CRITERIA								
<p>Before commencing construction, the Concesionaria Vial Unión del Sur will perform an executive characterization of each of the components of the social environment, recording their initial state allowing to reference data to analyze environmental trends. Likewise, the instruments aimed at fulfilling the objective must be designed.</p>								
INTERPRETATING RESULTS								

SMTMS – FOLLOW-JP AND MONITOR THE SOCIOECONOMIC TREND			
Through statistical analysis, the degree of environmental changes, high, medium or low is determined. These data will form the basis for possible adjustments to the management measures established in PMA.			
INDICATORS			
COMPONENT	INDICATOR	TYPE	SPECIFICATION
Economic	No. of workers who improved their economic conditions / N. of workers hired by the project.	Qualitative	Identify socioeconomic changes in the lives of workers due to project intervention
	Examine the socioeconomic conditions of workers before the project / current socioeconomic conditions of workers after the project.		
Cultural	Number of traffic accidents following implementation of the road culture program / No. of traffic accidents before implementing road culture program.	Quantitative	This measure is intended to reflect whether the road culture and participation program has had a significant incidence in the population of project area.
Demographic	Compare the population in the area of influence of the project with or without the project.	Qualitative	It is intended to reflect the contribution of the AI project recruitment measures on the area migration phenomenon.
	Inspect the quality and frequency of public and social services provided before vs after the project.	Qualitative	

SMTMS – FOLLOW-JP AND MONITOR THE SOCIOECONOMIC TREND			
Political / Org.	Verify the degree of contribution of the training to the institutional management of each municipality secretaries.	Quantitative	It seeks to identify the contribution to local governments through training processes.