

## Undermining environmental justice?

Community-Company conflicts with La Colosa gold mine in  
Cajamarca, Colombia

*Diana Noreña Ramirez*

---

Master Thesis Series in Environmental Studies and Sustainability Science,  
No 2015:024

A thesis submitted in partial fulfillment of the requirements of Lund University  
International Master's Programme in Environmental Studies and Sustainability Science  
(30hp/credits)



# LUCSUS

Lund University Centre for  
Sustainability Studies





**LUND**  
UNIVERSITY

---

## **Undermining environmental justice?**

Community-Company conflicts with La Colosa gold mine in Cajamarca,  
Colombia

Diana Alexandra Noreña Ramirez

A thesis submitted in partial fulfillment of the requirements of Lund University International  
Master's Programme in Environmental Studies and Sustainability Science

Submitted May 13, 2015

Supervisor: Torsten Krause, LUCSUS, Lund University



## **Abstract:**

Colombian government pursues an extractive-led development trajectory in which mining is considered as a key factor for reviving the economy. However, while mining has been important in the economic development of some countries, it has also been associated to conflicts, product of its high environmental impact and, in many cases, unequal distribution of benefits. "La Colosa" is a gold open pit mine project proposed in Cajamarca, Colombia which has being highly questioned by scholars, journalists, communities and environmental organizations due to the possible impacts that it can have on the environment. However, social issues have not been thoroughly investigated. Projects of the magnitude of "La Colosa" are known to generate hope to the local population where they are developed, as they can create jobs and improve the infrastructure of the place. Nevertheless, if the expectations about the benefits of mining are not fulfilled, this can lead to growing misunderstandings, mistrust and eventually conflict among local residents and the mining company. Studying the relationship that the company in charge of the project has with the community helps to understand both actors' interests and needs, which at the same time helps to ameliorate tensions among them. In this study I analyzed the nature of the student-Company relation, as students are the future decision makers and citizens of the world. I analyzed this relationship through the understanding of the socio-economic and cultural context in which it is developed. This relationship revealed that students are being marginalized in different ways. First of all, students do not have access to objective information, second, their cultural values are not considered, third they are excluded from the decision-making about the extraction of gold in Cajamarca and finally they are being forced into a "reduced mode of being". The results of this study showed that there is a high possibility that a conflict will be generated as consequence of this marginalization. If the government of Colombia continues fostering mining as an engine of development, it needs to recognize that mining will affect the social and cultural structure of the local communities, and include these impacts in the decision-making processes. The participation of the local community in planning will be important to reduce tension and to create process more accountable for the community.

**Keywords:** Gold mining, Environmental Justice, Colombia, Students, Cajamarca, La Colosa

**Word count:** 12584

## **Acknowledgements**

Foremost, I would like to express my sincere gratitude to my advisor Torsten Krause for his professional guidance and to Luise for her helpful feedbacks, during this final process. I would also like to show my appreciation to the people in Cajamarca that allowed me to develop this research. Furthermore, I would also like to say thank you to my fellow LUMES friends for sharing their ideas and for providing a wonderful learning experience during these two-years spent together. In special I would like to thank Flavia, Sydney and Lorena for becoming my family in Lund and making my stay in Sweden memorable.

I would also like to say thanks to my family specially my parents, grandmas and my brother, for believing in my dreams and supporting them all the time. My special acknowledgement goes to my love Mauricio, for his everlasting patience and for believing in me when I fail to, thanks for being my driving force.

Last but not least I would like to thank the Swedish Institute scholarship for giving me the opportunity to come to Sweden and expand my knowledge.

# Table of Contents

|  |           |
|--|-----------|
| Tables .....   | 7         |
| Figures .....  | 7         |
| Abbreviations.....   | 1         |
| <b>1. Introduction .....</b>   | <b>2</b>  |
| 1.1 Thesis rationale.....  | 4         |
| <i>1.1.1 Why high school students? .....</i>                                   | <i>4</i>  |
| 1.2 Research aim and questions .....   | 5         |
| 1.3 Thesis outline.....  | 6         |
| <b>2. Contextual Background information.....</b>                               | <b>6</b>  |
| 2.1 Mining sector in Colombia .....  | 6         |
| 2.2 “La Colosa” mining project.....  | 7         |
| <i>2.2.1 Description of the area .....</i>                                     | <i>9</i>  |
| <i>2.2.2 Resistance against the mine .....</i>                                 | <i>9</i>  |
| <i>2.2.3 Points of tension between the company and Cajamarca citizens.....</i> | <i>10</i> |
| <b>3. Theoretical and conceptual framework .....</b>                           | <b>11</b> |
| 3.1 Defining environmental justice .....                                       | 12        |
| 3.2 Political ecology.....   | 12        |
| <b>4. Research strategy.....</b>   | <b>13</b> |
| 4.1 Ontology and epistemology .....  | 13        |
| 4.2 Methodological approach .....  | 13        |
| 4.3 Methods of Data collection .....   | 14        |
| <i>4.3.1 Literature review .....</i>   | <i>14</i> |
| <i>4.3.2 Surveys.....</i>  | <i>15</i> |

|  |           |
|--|-----------|
| <b>4.3.3 Interviews .....</b>  | <b>15</b> |
| <b>4.4 Data Analysis .....</b>   | <b>15</b> |
| <b>4.5 Limitations of the study .....</b>  | <b>16</b> |
| <b>5. Results and Analysis .....</b>   | <b>16</b> |
| <b>5.1 Students' perceptions of the impacts of "La Colosa" to the environment and the society of Cajamarca .....</b> | <b>17</b> |
| <b>5.1.1 Awareness of the mining project.....</b>  | <b>17</b> |
| <b>5.1.2 General perception about "La Colosa" .....</b>  | <b>18</b> |
| <b>5.1.3 Impacts to local activities .....</b>   | <b>19</b> |
| <b>5.1.4 Impacts on job opportunities .....</b>  | <b>20</b> |
| <b>5.1.5 Impacts to the municipality .....</b>   | <b>22</b> |
| <b>5.1.6 Impacts to the environment.....</b>   | <b>24</b> |
| <b>5.2 AGA's social responsibility .....</b>   | <b>26</b> |
| <b>5.3 Analysis of students-AGA relation through Environmental Justice and Political Ecology .....</b>               | <b>28</b> |
| <b>6. Discussion .....</b>   | <b>31</b> |
| <b>7. Conclusion.....</b>  | <b>34</b> |
| <b>8. Reflections and suggestions for further research.....</b>  | <b>35</b> |
| <b>Appendix 1. Structure of Students' survey .....</b>   | <b>41</b> |
| <b>Appendix 2. Interview guide .....</b>   | <b>43</b> |



## Tables

|   |    |
|---|----|
| Table 1. Description of "La Colosa" by the students of Cajamarca .....  | 18 |
| Table 2. Students' perception about the interference of "La Colosa" to other local activities in Cajamarca..... | 19 |
| Table 3. Students' perceptions of the changes that the mine brings to Cajamarca. ....                           | 23 |
| Table 4. Students' perceptions of the impacts that "La Colosa" generates to the environment. ....               | 24 |

## Figures

|  |    |
|--|----|
| Figure 1. Map displaying the Location of "La Colosa". A) Location of Colombia; B) Location of Tolima Department; C) Location of Cajamarca; D) Location of "La Colosa". Source: Google Maps.....        | 8  |
| Figure 2. Impacts of "La Colosa" on job opportunities in Cajamarca. This figure shows the perception of the students about the impact that "La Colosa" may have on the job opportunities in Cajamarca. | 20 |
| Figure 3. Studies needed to work in "La Colosa". This figure shows the perception of the students regarding the studies needed to work at the mine. ....   | 21 |
| Figure 4. Job interests in the students of Cajamarca. ....   | 22 |
| Figure 5. Students' vision of Cajamarca in 30 years if there is gold mining.....   | 23 |
| Figure 6. Beneficiaries of the mining project. This figure shows the perception of the students regarding who will benefit from the mining project in Cajamarca. ....                                  | 25 |
| Figure 7. Stance towards "La Colosa". This figure shows the stance of the students towards the mining project. ....  | 26 |

## **Abbreviations**

|           |   |
|-----------|---|
| CORTOLIMA | Corporación Autónoma Regional del Tolima (Autonomous Regional Corporation of Tolima)                  |
| CGR       | Contraloría General de la República (General Comptroller of the Republic)                             |
| CSR       | Corporate social responsibility   |
| DANE      | Departamento Administrativo Nacional de Estadística (National Administrative Department of Statistic) |
| EJ        | Environmental Justice   |
| ELAW      | Environmental Law Alliance Worldwide  |
| UPME      | Unidad de Planeación Minero Energética (Mining and Energy Planning Unit)                              |
| OCMAL     | Observatory of Latin-American Mining Conflicts  |
| PE        | Political Ecology   |

## 1. Introduction

The gradual decrease in development of existing deposits of metals such as gold, silver and others, together with the strict environmental and labor regulations in developed countries, have forced mining companies to develop large projects in countries which allow mining in seams with lower grade ores (Fierro, 2012). The international investments in mining has shifted towards the developing world as a result of the economic liberalization reforms undertaken in the Global South, a consequence of the Washington consensus recommendations to overcome the financial crisis of the 1980s. The shifts in global investment have brought the attention to South America, resulting in increased mining activities in many of its countries (Bebbington et al., 2008). In fact, as stated by Urkidi and Walter (2011, p. 683), "Latin America is the region where most gold prospecting took place in the world in the 1990s and 2000s, and this is set to continue".

While mineral resources have accelerated economic growth in some countries, the economic benefits of mining come at an environmental and social cost (Wan, 2014). Mining has one of the highest direct environmental impacts of all economic activities, and therefore social and environmental conflicts have been generated by mining all around the world (Muradian, Martinez-Alier, & Correa, 2003; Urkidi & Walter, 2011). The Latin American Observatory of Mining Conflicts reports that there are more than 200 active mining conflicts in the region (OCMAL, 2014). The environmental impacts of mining have often imposed costs on neighboring communities, without sufficient compensation (Saha, Pattanayak, Sills, & Singha, 2011). Furthermore, mining benefits are often distributed unequally (Weber-Fahr, 2002). Communities affected by mining are often unable to express their concerns of issues of social and environmental justice, which poses challenges in the preservation of cultural integrity, and the ability to participate in decisions about mineral development from a position of prior informed consent (Bridge, 2004).

Colombia considers the development of the mining sector a key factor for reviving and growing its economy. During the last decade the government of Colombia has promoted mining as an engine of development, investment and job creation (Santos, 2010). Thus, the Mining and Energy Planning Unit (UPME) released the "Mining development Plan" with the main objective to transform Colombia into one of the three main destinations for private investment allocated to mining exploration in Latin America. In order to achieve this goal, the UPME specifies that state resources must be oriented toward income generation; mining formality procedures must be simple and clients must be seen in

a segmented way<sup>1</sup> (Unidad de Planeación Minero Energética-UPME, 2006). Following the “Mining Development Plan”, mining activities increased significantly in much of the country. However, the growth of mining activities has been linked to social problems leading to displacement of people and communities, thereby violating their fundamental rights (Contraloría General de la República-CGR, 2013).

A prominent foreign investor that has benefitted from the development of the mining sector in Colombia is AngloGold Ashanti (AGA). AGA is the third-largest multinational gold-mining company in the world, and currently has more than 400 mining concessions in Colombia (Fierro, 2012; UPME, 2015a). In 2009 AngloGold Ashanti’s Colombia Project Manager envisaged a gold open-pit mine in Cajamarca-Tolima, with an estimated resource potential of 25 to 35 million ounces-Moz<sup>2</sup> (AngloGold Ashanti-AGA, 2011). The project, known as “La Colosa” has become subject of an important debate in Colombia due to its magnitude and its potential impacts to the environment and society.

The Environmental Law Alliance Worldwide ELAW (2010)<sup>3</sup>, reported that the presence of a large mining company could cause great hope to the local population where the project will be developed, as it promises to generate jobs and contribute to improving the living conditions of the people. However, Urkidi and Walter (2011) have reported that communities have also mobilized and conducted popular referendums or consultations in order to stop mining projects. In the context of “La Colosa”, some locals may have good expectations regarding the mining project, while others may have a bad perception of it. As AGA has been in Cajamarca for around 10 years, it is likely that the presence of the company has changed the expectations of people in Cajamarca. However, what impact “La Colosa” has caused in the society of Cajamarca by now, is still unknown.

In my thesis I analyze the nature of the relationship that the company has with the community of Cajamarca. More precisely, I study the relation among students and AGA, by understanding the socio-economic and cultural context in which this relationship has developed. Through this analysis, the tensions which can lead to future conflicts between the people of Cajamarca and AGA can be detected. These tensions can then be mediated by a better understanding of both actor’s interests

---

<sup>1</sup> Mining clients were segmented in four categories in order to satisfy them according to their needs. Segment one: traditional miners; segment two: emerging mining companies; segment three: mining development accelerating agents and segment four: major mining companies operating the largest mines in the world (UPME, 2006).

<sup>2</sup> One million ounces equals 28349.5 kilograms

<sup>3</sup> ELAW is a global alliance of attorneys, scientists and other advocates collaborating across borders to promote grassroots efforts to build a sustainable, just future.

and needs. This can translate into effective planning and decision-making to address the communities' needs, while achieving the national goal of revenue generation and consequent development.

## **1.1 Thesis rationale**

### ***1.1.1 Why high school students?***

According to the population Census of 2005, the municipality of Cajamarca has a population of 19,789. Although there are no recent and complete statistics about the demographics of the municipality, according to *Departamento Administrativo Nacional de Estadística* (DANE) estimations, young people between 14 and 28 years represent 26% of the total population (DANE, 2005). Given the large share of young people in Cajamarca, their voice is important for any project planned in this municipality in order to meet their employment, housing and higher education demands. Furthermore, as future contributors, decision makers and citizens of the world, youth have a special interest in sustainable development and require opportunities to participate in and contribute to a sustainable future (Malone, 2001). The role of youth in sustainable development is recognized in the Rio Declaration's Principle 21: "The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all" (United Nations, 1992). According to the United Nations, the involvement of youth in environmental and developmental decision-making and in the implementation of programs is critical to achieve sustainable development. In fact, as specified by de Vreede, Warner, and Pitter (2014), committed and young people can influence change as they have a great investment in future quality of life and can approach problems with a fresh, optimistic view.

Due to the importance that youth represent for the sustainable development and especially to the municipality of Cajamarca, their opinion towards the mining project is very valuable. AGA announced that they will need approximately 5000 workers for the construction of "La Colosa" (AGA, 2014). In this regard, and taking into account that "La Colosa" is still in the exploration stage, the youth of Cajamarca represent the potential workforce for the mining company, once construction of the mine commences. However it is still unknown if the youth of Cajamarca agrees with this project and see it as a job opportunity. The attitudes, knowledge, behaviors and concerns that youth have about the environment will directly and indirectly affect future decisions concerning natural resources and how they will be used and sustained (Meinhold & Malkus, 2005). In this sense, analyzing the relations between the youth and the company will shed light on their attitude towards the project and is therefore helpful to understand the development trajectory in Cajamarca. Since analyzing the

opinion of all youths in Cajamarca is not possible in the timeframe of this study, my research will focus on high school students between 14 and 26 years old<sup>4</sup>.

## **1.2 Research aim and questions**

The aim of my study is understand how the establishment of the “La Colosa” goldmine will impact the surrounding community. I seek to analyze the relationship between AGA and the school community in order to find out what attitude the latter has towards the mining project. Understanding the interests and needs of future generations will result in better planning and decision making, which addresses communities’ needs while also fostering development.

In my thesis I explore the nature of the relations that the company has developed with the community of Cajamarca. More precisely, I study the relationship among students and AGA, by understanding the socio-economic and cultural context in which this relation has developed. The understanding of this context will help to lessen the tensions among the people of Cajamarca and AGA by an effective planning and decision making that addresses communities’ needs.

The research question that will guide my investigation is:

- What are the characteristics of the relations between the students from Cajamarca and the mining company AGA, and to what extent do these relations generate conflicts between the two?

To be able to adequately answer these questions I have divided the research into three sub-questions:

- What are high school students’ perceptions of the impacts of “La Colosa” to the environment and the society of Cajamarca?
- In what ways does AGA take social responsibility for the “La Colosa” project?
- What kind of social relations have been formed between Cajamarca students and AGA and how does it obscure environmental justice?

---

<sup>4</sup> In Colombia, the Law 375 of 1997 or “Youth Law” stipulates that for purposes of participation and social rights a young person is understood as a person between 14 and 26 years old (Republica de Colombia-Gobierno Nacional, 1997).

### **1.3 Thesis outline**

My thesis is organized in eight chapters. Chapter 1 introduces the topic and lists the questions which guided me through the research. The second chapter contains an overview of the context in which “La Colosa” is being developed, a presentation of the mining sector in Colombia, tensions among local people and resistance against the mine. The third chapter presents the theoretical background based on the literature about the concepts of environmental justice (EJ) and political ecology (PE). The fourth chapter contains the methodological approach and the research methods used to collect and to analyze my data. The fifth chapter includes the results and the analysis of the students-AGA relationship through the lens of PE. In the sixth chapter I discuss my findings. The seventh chapter concludes the thesis with the main findings. Finally my reflections and suggestions for further research are presented in chapter eight.

## **2. Contextual Background information**

### **2.1 Mining sector in Colombia**

With the idea of attracting private sector investment in the development of mining, the Government of Colombia has reformed its mining policies. For example, mining formality procedures were eased by optimizing the processes of mining contracting and of customer service, and by giving priority to the first person who requests a mining concession (Fierro, 2012). Furthermore, in accordance with the Law 685 of 2001 (The Mining Code), the duties of the State for the planning regulation and administration of the mining industry were defined (Republica de Colombia-Gobierno Nacional, 2001). In the same law, mineral resources became exclusive property of the state and a resource of public interest, giving mining precedence over other land uses, except in those areas excludable due to environmental restrictions such as natural national parks, regional natural parks and forest reserves. As consequence of the sectorial changes, mining activities have increased in much of the country. Nowadays, more than a third of the territory has mining concessions, covered by pending licenses or is intended for mining development through strategic mining areas (CGR, 2013). Foreign direct investment in the mining sector increased by 62,5% from USD 1,246 million in 2004 to USD 2,025 million in 2012 (UPME, 2015c). The contribution of mining to GDP increased from 1,8% in 2000, to 2,4% in 2012 (Villar Gómez, 2013). In the specific case of gold, the production increased by 47,7%, from 37,74 tons in 2004 to 55,74 tons in 2013 (UPME, 2015b).

Mining has been important to the economic development of industrialized countries such as Australia, Canada and the United States. However, there are some cases in which mining wealth has not contributed to development at all, such as Congo, Sierra Leon and Liberia. In fact, these countries seemed to be worse off because of mismanaged mining development and plundered mineral wealth (Weber-Fahr, 2002). The particularities of each country make it very difficult to secure the means in which mining can contribute to local or even national development.

According to FEDESARROLLO (2008) the requirements for mining to become a driver of economic development are: strong institutions, productive linkages around mining, improvement of human resources and stable macroeconomic environments. Taking these requirements into account, Fierro (2012) stated that mining in Colombia is far from becoming a driver for economic development. The mining sector in Colombia is not based in productive linkages. Moreover, Colombia has weak institutions and lacks good governance in the mining sector. In fact, the Contraloría General de la República-CGR (2013) ensures that the rules and instruments that regulate mining activities in the country are not effective enough to properly protect, safeguard and maintain natural resources and the fundamental rights of the citizens of the country. Due to the high importance that the government of Colombia is giving to the mining sector, the increase in the mining activities in the country raises concern among Colombians who are worried about the future of the environment and society.

## **2.2 “La Colosa” mining project**

“La Colosa” is an open-pit gold mine planned in Cajamarca, Tolima, with an estimated resource potential of 25Moz to 35Moz (AGA, 2011). The mine covers an area of 515,75 Ha and lies in steep terrain in Colombia’s central Cordillera – more precisely on the districts of La Luisa, La Paloma and El Diamante in Cajamarca Municipality (Pax Christi, 2009) (see Figure 1 for the geographical location of “La Colosa”). If exploited, the project would produce between 16 tons and 29 tons of gold per year converting it into the fifth largest (in terms of annual production) gold mine in the world (Colombia Solidarity Campaign, 2013).

“La Colosa” is solely owned by the company AngloGold Ashanti and it is currently in the exploration stage (prefeasibility), aiming to carry out mineral exploration to identify areas in which extraction is feasible from the technical, economic and environmental point of view (Pax Christi, 2009). The company estimates to start producing by 2019 (AGA, 2011).





**Figure 1.** Map displaying the Location of “La Colosa”. A) Location of Colombia; B) Location of Tolima Department; C) Location of Cajamarca; D) Location of “La Colosa”. Source: Google Maps.

### **2.2.1 Description of the area**

According to CORTOLIMA (2010), “La Colosa” is located in an environmentally-significant area as it is placed in part of a central forest reserve. Furthermore, the characteristics of the flora, fauna, soils and hydrogeology make this place an important area for the protection, control and supply of surface water resources, as well as for biodiversity conservation and environmental improvement. Besides its environmental importance, “La Colosa” is also located in a region of economic significance. The municipality of Cajamarca is considered to be an important agricultural hub in Colombia due to its role as a leading producer of “Arracacha” (*Arracacia xanthorrhiza*), as well as its production of coffee, beans, peas, corn, passion fruit, blackberry, gooseberry, fig, orange, and banana, among others (Colombia Solidarity Campaign, 2013).

### **2.2.2 Resistance against the mine**

Despite the benefits of mining put forth by the government and AGA, both scholars, journalists, communities and environmental organizations have raised questions with regards to the mining policy of the government and the actions of the company. Street demonstrations against the mine began to occur in 2008 in Ibagué-Tolima and mobilizations during the regional festivities of the department. Although there have been several demonstrations against the project, the most representatives have been the “Marchas Carnaval” (carnival mobilizations) in defense of life, water, land and food sovereignty, held in Ibagué<sup>5</sup>. These types of mobilizations have been conducted six times already and have been attended by thousands of people. In the fifth of these mobilizations, held in 2013, approximately 30000 people participated demonstrating their dissatisfaction with the project. In this mobilization the director of CORTOLIMA, Jorge Enrique Cardozo; Tolima Governor, Luis Carlos Delgado Peñon, and the mayor of Ibagué, Luis H. Rodriguez, publicly ratified their rejection to the mining project and supported the protests of the citizens (Corredor Gil, 2014).

One of the groups playing a leading role in the collective actions against “La Colosa” is university students. One of the many reasons that motivate them to raise their voice against the mine is the recognition of the few opportunities that the students have to win a legal fight against the government or the company. This makes them see the demonstrations as a good way to show opposition to this project. Furthermore, students use new technologies to increase media presence on social networks like Youtube, Facebook, Twitter; Blogs and websites like “La Reversa”, “Conciencia Ambiental” and “Comité Ambiental”; and alternative media such as the magazines “Revista Bios y

---

<sup>5</sup> Ibagué is the capital of the Tolima department.

Ecos” and “El Salmón Urbano” (publication produced exclusively by students of the University of Tolima) (Vargas Alba, 2011).

Another group with strong presence in the fight against the mine is the farmers of the Cajamarca. Their resistance to the mine is motivated by fear of losing their crops because of the impacts associated to the mine activities, such as water pollution or water scarcity. With this same concern, some business associations have also spoken out against “La Colosa” such as the rice growers. Notwithstanding, it is important to note that there is a division between the farmers, as some of them see the mine as a source of employment and development (Vargas Alba, 2011).

Besides the protests against the project, Corredor Gil (2014), reported how organizations such as Pax Christi, AIDA, Red Reclame Colombia and Ecotierra have spoken out against “La Colosa” by denouncing, studying and reporting the risks to which the society and the environment are exposed if the gold extraction is carried out. Similarly, academics have also contributed to collective action against the mine by informing the citizens. At the University of Tolima, for example, teachers and environmental experts have tried to inform and mobilize the community. In this same way, the Universities of Rosario and Los Andes have organized forums with the AIDA organization to analyze and communicate legal inconsistencies that have emerged in the case “La Colosa” (Vargas Alba, 2011). Furthermore, other less direct forms of resistance against “La Colosa” conducted by the academy are the different research and analyses of mining and foreign investment in the country (See Arango Mendoza, 2014; CGR, 2013; Fierro, 2012 among others).

### ***2.2.3 Points of tension between the company and Cajamarca citizens***

Different authors such as Arango Mendoza (2014) and Martínez Rivillas (2009) have associated “La Colosa” with significant impacts on local fresh and groundwater sources. The authors predict a decrease in water supply, as well as a substantial chemical and biological contamination as consequences of the activities related to the exploitation stage. Agriculture is the largest economic activity in Cajamarca and requires a constant supply of water for irrigation. In this sense, locals as well as the farmers are worried about a possible water shortages and competition for the resource (Vargas Alba, 2011). Additionally, the basins of the Combeima and Coello rivers will provide the water for the mine. These rivers are the primary source of fresh water for the municipalities of Ibagué, Espinal, Cajamarca and Coello. Local people are concerned that the mine will threaten water availability as well as quality (Vargas Alba, 2011).

AGA's negative record in Cajamarca and in other countries has created mistrust among the citizens of Cajamarca. AGA has already violated the environmental legislation of Colombia by conducting mining exploration activities in Cajamarca's Central Forest Reserve without the required permits (Ministerio de Ambiente Vivienda y Desarrollo Territorial, 2010). Furthermore, when the company arrived to Cajamarca in 2003 it used a different name, but changed it in 2008 to its actual name "Anglogold Ashanti Colombia S.A.". Internationally, AGA has been associated with environmental and social conflicts such as the contamination of drinking water sources in Ghana and the financing of paramilitary groups in Congo (Colombia Solidarity Campaign, 2013). Besides creating mistrust, AGA's actions have also raised concern among Cajamarca citizens who have concerns about the company's activities in the municipality.

Idárraga Franco, Muñoz Casallas, and Vélez Galeano (2010) reported that in the regions of Colombia where AGA develops or plans to develop exploration and exploitation activities, the militarization processes have intensified. The processes of militarization have been accompanied by systematic violations of human rights and actions that disregard the principle of distinction<sup>6</sup>, established in International Humanitarian Law (IHL), since in many cases members of local communities are accused of belonging to the guerrilla groups (Idárraga Franco et al., 2010). There is a constant presence of armed groups in Cajamarca and the community fears that existing conflicts among these groups will intensify, particularly given the support that the national army offers the company.

### **3. Theoretical and conceptual framework**

In my thesis I draw on PE and EJ in order to interpret the social relations surrounding "La Colosa". I did this considering the importance that the regional context has in framing how environmental injustice is understood, experienced and contested by the students of Cajamarca. In this chapter I will define EJ and PE explaining the need for both theories when analyzing "La Colosa".

---

<sup>6</sup> The principle of distinction establishes that: the parties to the conflict must at all times distinguish between civilians and combatants (International Committee of the Red Cross, 2015)

### **3.1 Defining environmental justice**

In theory, EJ “involves the fair treatment and meaningful involvement of all people regardless of race, ethnicity, culture, income or educational status, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (Environmental Protection Agency, 2015). However, the definition of ‘fair’ is not universally shared (Müller & Clayton, 2013). Justice can be defined in two ways: distributive justice and procedural justice. Distributive justice has been mainly analyzed from the context of ethics and morality, equating social justice with the principle of equal distribution (Lee, 2009). Procedural justice, on the other hand, recognizes justice as socially constructed and focuses on formal equal opportunities. In this sense, procedural justice is defined as fairness in decision-making processes and deriving distributive outcomes. Fairness in theory should translate into fairness in distributions and entitlements (Wan, 2014). Therefore, environmental justice related to distribution is about the equal enjoyment of a healthy environment as well as the fair use of natural resources. Meanwhile, procedural justice points out the fairness of decision making and processes of environmental policies (Lee, 2009).

EJ focuses in problematizing the unequal distribution of costs and benefits. However, the focus on distributive justice fails to achieve EJ, as compensation for lost livelihood or cultural resources is usually impossible (Lee, 2009). EJ avoids social relations and the historical, cultural, and ideological contexts that exist within capitalist geographies (Lee, 2009). Therefore, EJ perspectives alone are inadequate to comprehend the particular roots and dynamics of mining’s unequal social and environmental legacies (Keeling & Sandlos, 2009). Environmental injustice related to mining activities has many potential causes through social relations, social structure, and so on. In this sense, studies of social relations from the perspective of PE can be useful to understand the root of environmental injustice (Lee, 2009). Thus, in order to analyze EJ in “La Colosa”, I will analyze social relations by drawing on PE.

### **3.2 Political ecology**

Lee (2009, p. 45) defined PE as “the study of conflicting social groups with different political powers projected on to a specific environment”. Political ecologists “accept the idea that costs and benefits associated with environmental change are for the most part distributed among actors unequally ... [which inevitably] reinforces or reduces existing social and economic inequalities ... [which holds] political implications in terms of the altered power of actors in relation to other actors” (Robbins, 2004, p. 11). PE has centered on the study of how political and economic structures can explain

relationships between human–environment interaction and environmental (primarily land) degradation in the developing world (Harden, 2012). However, PE has ignored the issue of injustice due to its lack of consideration of the deep relations between PE and justice. As EJ and PE share an emphasis on the uneven geographical distribution of the causes and effects of environmental problems, PE helps me to study the origin of these misdistributions by considering the connections between environmental degradation and closely related social and economic inequities. In this sense, PE will help me to uncover the structures and relationships that underlay procedural injustice.

## **4. Research strategy**

### **4.1 Ontology and epistemology**

The starting point for my thesis is interpretivism, with constructivism as an ontological position. In this sense, I recognize reality as multiple and relative (Lor, 2011). In other words, I identify the knowledge of the world as the result of an intentional process, which is constructed by the context through meanings and understandings, developed socially and experientially while constantly undergoing reconstruction (Bryman, 2008; Hepburn, 2009; Weber, 2004). I follow this approach as it is my standpoint that the perception of students is socially constructed, emergent from the context and societal interactions. Interpretivism allows me to distance myself from rigid structural frameworks and instead to adopt a flexible research structure, which allows me to be receptive to human interactions and make sense of what people perceive as reality (Carson, 2001). The findings of this study will be the result of my interaction to the community. In this sense, reality is constructed according to how I make sense of the situation. For this reason, I do not claim full objectivity in my investigation. I agree with Holliday (2007) who stated that scientific methods can never claim full objectivity.

### **4.2 Methodological approach**

I decided for a qualitative research approach since this approach is useful in understanding social relations (Flick, 2009). Traditional deductive methodologies based on the testing of theories against empirical evidence are not suitable to study social relations because of the differentiation of objects. Thus the use of inductive strategies is required for approaching this social context (Flick, 2009). A qualitative research approach is helpful to “understand the social world through an examination of the interpretation of that world by its participants” (Bryman, 2008).

Studying the social relations between the entire student body of Cajamarca and AGA was not practical within the timeframe of this research; the scope had to be narrowed down to one specific community to better understand its complexities. Thus I conducted a case study with two state schools of Cajamarca. More specifically, I chose one school from the rural area and the other one from the urban area, in order to have representation of the youths from both areas<sup>7</sup>. The reason I chose state schools is because they do not charge for tuition fees or services so are affordable to the people. State schools handle larger number of students than private institutions, allowing me to have a broader picture of the students of Cajamarca. However, I should clarify that I performed this study with the assumption that the opinion of these students did not reflect the opinion of all the students of Cajamarca. In this sense, I will not generalize my findings.

### **4.3 Methods of Data collection**

In an instrumental case study “a particular case is examined mainly to provide insight into an issue” (Stake, 2000, p. 437). Case studies are multi-perspectival analyses in which the researcher considers the voice and perspective of the actors, as well as the relevant groups of actors and the interaction between them (Tellis, 1997). The use of a case study methodology offers the opportunity of collecting information across a wide range of dimensions, seeking to achieve the validity and reliability of the findings, known as triangulation (Yin, 2003). Triangulation “makes it possible to capture different aspects of the research issue” increasing the confidence in findings (Flick, 2009, p. 306). I collected data using different methods such as literature review, interviews and surveys, with the purpose of getting a greater confidence in the findings.

#### **4.3.1 Literature review**

I conducted a comprehensive literature review to understand the institutional and legal context of mining in Colombia, the policy trends and to what extent there is an increase in mining activities in the country due to changes in policies. I also analyzed the legal context to understand the process of decision-making for a mining project. At the same time, in order to better understand the situation in Cajamarca, I gathered data from NGO reports and general secondary data about the proposed open pit gold mine “La Colosa”. Likewise, I collected information related to social conflicts created by mining and the mobilizations against these activities. The secondary sources of data guided the generation of the theoretical underpinnings of my study.

---

<sup>7</sup> Based on the population census of 2005, the population of Cajamarca is equally distributed between the rural and urban area (DANE, 2005).

### **4.3.2 Surveys**

With the purpose of assessing the position of the High school students in relation to “La Colosa” while understanding the perception that they have about this project, I conducted surveys among students in grade 10 and 11<sup>8</sup> in both schools. The advantage of using surveys is that it produces a large amount of data in a short time for a fairly low cost and the analysis identifies extreme outcomes as well as delineates associations between variables in a sample (Gable, 1994; Kelley, Clark, Brown, & Sitzia, 2003). Prior to the surveys I first requested an authorization from the principal of each school in order to gain access the students. Likewise, all participants were first informed about the purpose of the project. The structure of the surveys can be found in the appendix 1 (in Spanish).

### **4.3.3 Interviews**

With the aim of understanding how AGA representatives perceive the company’s relationship with the students of Cajamarca, as well as to know the commitment of the company to the locals, I interviewed one representative of the company using a semi-structure interview. According to Bryman (2008), semi-structured interviews provide insights into how the interviewees see the social world and how they understand different issues. Thus, while some questions or issues guide the interview and orient it to answer the research questions, it also provides flexibility for asking in-depth questions when further information is needed. The interview with the AGA representative was conducted in March 2015. Before the interview, I informed the interviewee about the purpose of the study and spoken consent was obtained to record and to transcript the interview. The interview guide is presented in appendix 2 (in Spanish).

## **4.4 Data Analysis**

After collecting the data the next step was coding the material identifying themes and patterns. Recurrent themes were then grouped into larger categories. As explained by Bendassolli (2013, p. 8), “Classifying or clustering themes or codes into categories allows researchers to organize them and develop conceptualizations about them”. Coding is then, the first transposition from the empirical to the theoretical. The larger categories were the ones used here for the analysis of students-AGA relationship.

---

<sup>8</sup> Students belonging to these grades are normally in an age range of 14-18 years old



#### **4.5 Limitations of the study**

Due to security concerns<sup>9</sup>, the participants were not willing to be personally interviewed and is why I decided to conduct anonymous paper surveys, despite the disadvantages that these could pose for my study. As a researcher I am aware that once the survey is done, it is possible to realize that some crucial item was omitted from the questionnaire, or that a question was misunderstood by respondents, making it impossible to clarify the data (Gable, 1994). However, I based the surveys on open questions, hoping the respondents would use the opportunity to express themselves freely.

Due to AGA's policy, I could only interview the Manager of Corporate affairs of the project "La Colosa" as he is the only person allowed by the company to give out information about the project. Interviewing just one person of the company could lead to missing information.

As the interviews and surveys were conducted in Spanish and several of the document sources are in Spanish while the analysis was conducted in English the validity could be compromised as the translations are based on my personal understanding.

### **5. Results and Analysis**

In this section, I will explain the social relation between the students from Cajamarca and the mining company, by analyzing it from three different angles. First, I will identify the perception that the students have of "La Colosa" (sub-RQ1). Subsequently, I will analyze the commitment of the company to the society of Cajamarca (sub-RQ2) and contrast it to the government requirements about social responsibility. Lastly, I will analyze the relationship of students and AGA (sub-RQ3) through the lens of PE.

---

<sup>9</sup> Cajamarca is known for being historically affected by the armed conflict, and in many cases locals have suffered serious threats from paramilitary groups and the guerrilla (Vargas Alba, 2011).

## **5.1 Students' perceptions of the impacts of "La Colosa" to the environment and the society of Cajamarca**

In this section I show the perception of the students regarding the impacts that the mine could have on the environment and the society of Cajamarca. The whole section includes answers from 155 students, from which 119 belong to the School 1 and 36 belong to the School 2<sup>10</sup>. The gender distribution among the respondents was almost equal with 54% male and 46% female respondents. Furthermore, in terms of age distribution, the majority of the students interviewed (83%) were aged from 14 to 17 years old and just 12% of the students were 18 years old, the latter ones according to Colombia constitution are legally accountable adults. The other 5% did not specify the age.

### ***5.1.1 Awareness of the mining project***

In order to know if the students were aware of the project "La Colosa", I asked them to indicate whether they knew about any mining project in Cajamarca, and if so, to mention the name as well as the reason or purpose for this project. However, once I analyzed their answers I found some irregularities among these two questions. For example, students who at first claimed not to know about any mining project in the area, in another question answered by naming "La Colosa" or even by naming AGA. Similarly, students who first had mentioned to know about mining projects in Cajamarca, when asked about the names of the projects didn't answer anything that could be related to a mining project. Although with these two questions I expected to measure the awareness of the students regarding the project, the inconsistency of the answers did not allow measuring their awareness. However the rest of my questionnaire was specific to the Project "La Colosa" and the students answered most of these questions. This shows that when students were explicitly asked about "La Colosa" they indeed recognized the project. Thus, it is possible that the questions about the knowledge of mining projects in Cajamarca were not clear enough for students and therefore some of them did not answer the questions or answered negatively. In this regard, I will not present the results from these two first questions; instead I will assume that all students are aware of the project.

---

<sup>10</sup> For the purpose of this analysis, the urban school is referred to as School 1, whereas the rural school is referred to as School 2.

### 5.1.2 General perception about “La Colosa”

In order to recognize students’ general perceptions towards the mining project, I asked the students to describe in their own words what this project represents for them. As a result of their answers I identified nine different themes, of which five were negative perceptions, three were neither negative nor positive and one was positive. As negative perceptions I classified the themes of “Environmental damage-destruction”, “words of opposition to the project”, “Bad faith (fraudulence)”, “generates economic income but affects Cajamarca” and “Looting (theft)”. Summing these themes I could notice that most students (72%) have a negative perception of the project, while only 5% described this project as beneficial, and the rest mentioned descriptions without a tendency towards positive or negative (see Table 1). When I totaled the percentages that related to a negative description of the project in each school, I found that 67% students of School 1 described the project in a negative way, while in School 2 only 89% of the students did. Thus, although students from both schools showed to have a negative perception about the project, students from School 2 showed to have a more negative perception about “La Colosa” than students from School 1. However, “Environmental damage” was the most used expressions to describe the project in both schools with 29% of the students mentioning the term.

**Table 1.** Description of "La Colosa" by the students of Cajamarca

| Description of “La Colosa” by the students      | School 1              |                | School 2              |                | Total of respondents | Overall Percentage |
|---|-----------------------|----------------|-----------------------|----------------|----------------------|--------------------|
|   | Number of respondents | Percentage     | Number of respondents | Percentage     |                      |                    |
| Environmental damage-destruction                | 35                    | 29,41%         | 10                    | 27,78%         | 45                   | 29,03%             |
| Words of opposition to the project              | 12                    | 10,08%         | 10                    | 27,78%         | 22                   | 14,19%             |
| Gold exploitation (mining, exploration)         | 18                    | 15,13%         | 2                     | 5,56%          | 20                   | 12,90%             |
| Generates economic income but affects Cajamarca | 14                    | 11,76%         | 5                     | 13,89%         | 19                   | 12,26%             |
| Bad faith (fraudulence)                         | 15                    | 12,61%         | 4                     | 11,11%         | 19                   | 12,26%             |
| Did not know- Did not respond                   | 10                    | 8,40%          | 1                     | 2,78%          | 11                   | 7,10%              |
| Looting (theft)                                 | 4                     | 3,36%          | 3                     | 8,33%          | 7                    | 4,52%              |
| Beneficial (helps farmers, job creation)        | 6                     | 5,04%          | 1                     | 2,78%          | 7                    | 4,52%              |
| Other words                                     | 5                     | 4,20%          | 0                     | 0,00%          | 5                    | 3,23%              |
| <b>Overall Total</b>                            | <b>119</b>            | <b>100,00%</b> | <b>36</b>             | <b>100,00%</b> | <b>155</b>           | <b>100,00%</b>     |

### 5.1.3 Impacts to local activities

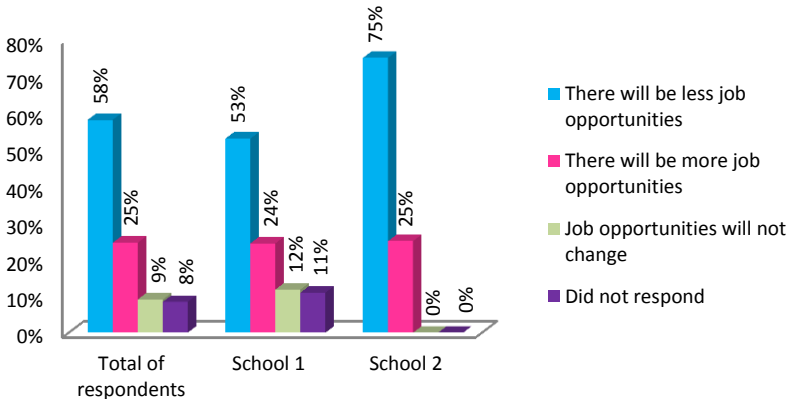
To find out if the students believed that “La Colosa” could affect other local activities in Cajamarca, I explicitly asked them about this possibility. Among their answers I identified eight relevant themes. Six of these themes referred to an interference to local activities. Four referred to a negative interference of the mine with local activities, in one of them they referred to a positive interference and in another one they referred to the existence of interference but without specifying if it is positive or negative. Of the other two themes left, in one, students referred to the no interference of the project over local activities, while in the last category I grouped the students who did not answer the question. After adding up the four themes that referred to a negative impact, I noticed that most of the students (74%) stated that the mine could interfere negatively with other local activities and only 4% referred to a positive interference. Table 2 depicts that the most representative thought among students of both schools, with a percentage of 47%, is that there will be less farming due to environmental damages such as water shortage, pollution and dry soils. It is worth noting that in School 1 some students believe that “La Colosa” does not interfere in any way with other local activities, while in School 2 none of the students mentioned this.

**Table 2.** Students’ perception about the interference of “La Colosa” to other local activities in Cajamarca.

| Interference with other local activities                               | School 1              |                | School 2              |                | Total of respondents | Overall percentage |
|--|-----------------------|----------------|-----------------------|----------------|----------------------|--------------------|
|  | Number of respondents | Percentage     | Number of respondents | Percentage     |                      |                    |
| Less farming due to environmental damage                               | 53                    | 44,54%         | 20                    | 55,56%         | 73                   | 47,10%             |
| Did not know-Did not respond   | 17                    | 14,29%         | 3                     | 8,33%          | 20                   | 12,90%             |
| Abandonment of agricultural activities to go to work in the mine       | 17                    | 14,29%         | 3                     | 8,33%          | 20                   | 12,90%             |
| Other (increase in the cost of living, displacement of people)         | 12                    | 10,08%         | 1                     | 2,78%          | 13                   | 8,39%              |
| Acquisition of land by the mining company, displacing other activities | 4                     | 3,36%          | 5                     | 13,89%         | 9                    | 5,81%              |
| Does not interfere with other activities                               | 8                     | 6,72%          | 0                     | 0,00%          | 8                    | 5,16%              |
| Helps farmers  | 4                     | 3,36%          | 2                     | 5,56%          | 6                    | 3,87%              |
| Interferes with other activities, but not specified how                | 4                     | 3,36%          | 2                     | 5,56%          | 6                    | 3,87%              |
| <b>Overall Total</b>   | <b>119</b>            | <b>100,00%</b> | <b>36</b>             | <b>100,00%</b> | <b>155</b>           | <b>100,00%</b>     |

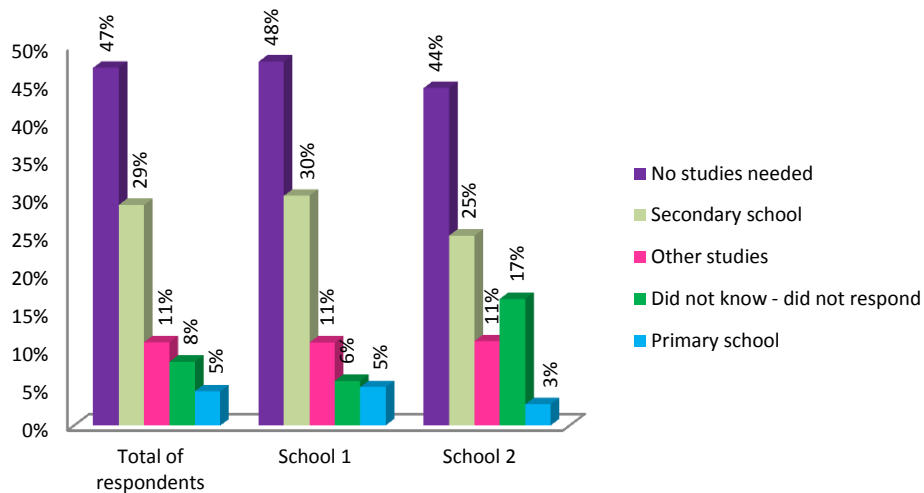
**5.1.4 Impacts on job opportunities**

I asked the students about their perception regarding the effect of the mine on job opportunities in Cajamarca. Most of the students (58%) said that if the mine starts their operation phase, job opportunities will decrease. By contrast 25% of students mentioned that gold mining would increase job opportunities in Cajamarca. Thus, the majority of students (83%) said that job opportunities will be affected by mining activities either for good or bad, 9% specified that job opportunities will not change, and 8% did not answered the question (see Figure 2).



**Figure 2.** Impacts of "La Colosa" on job opportunities in Cajamarca. This figure shows the perception of the students about the impact that "La Colosa" may have on the job opportunities in Cajamarca.

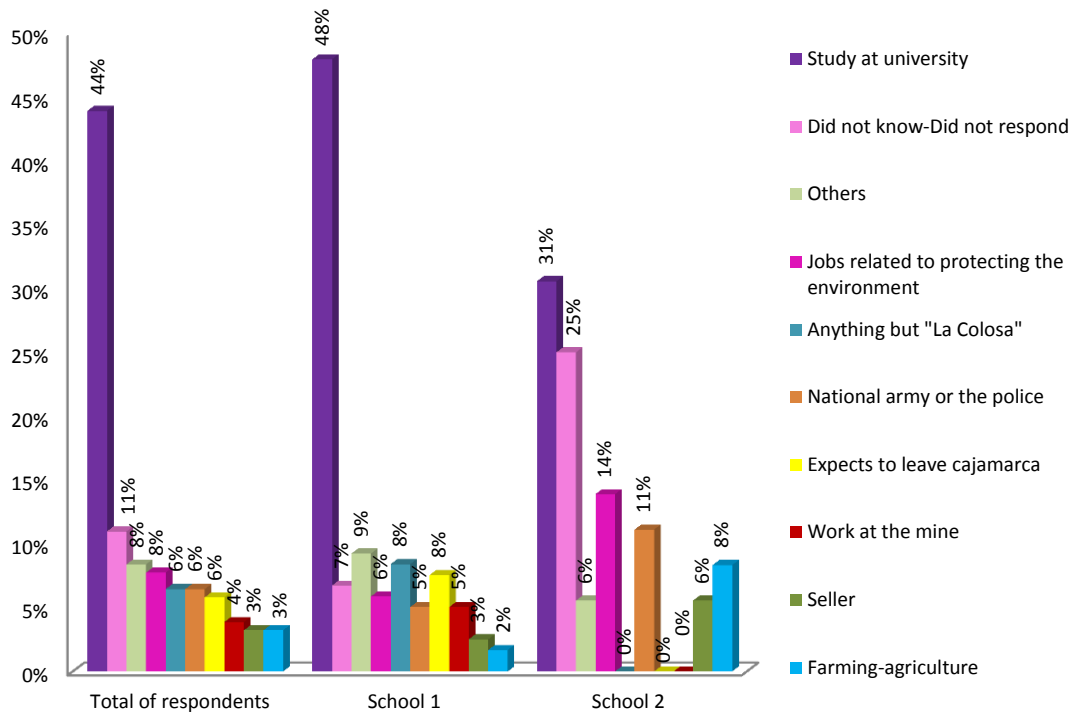
With the purpose of understanding the type of job opportunities offered by the mine and the interest of the youth regarding these job opportunities, I asked the students to mention the academic background they thought it was needed to work at the mine. Subsequently, I supplemented this question by asking the students about their job interests. In regards to the academic background needed to work at the mine, 47% of students assured that no studies were needed, 29% mentioned that at least secondary studies were needed and 4% said that only primary studies are needed to work at the mine (see Figure 3). Just 11% of students mentioned that other studies, such as university studies, were needed in order to work in "La Colosa".



**Figure 3.** Studies needed to work in “La Colosa”. This figure shows the perception of the students regarding the studies needed to work at the mine.

When I asked the students about their job interests, I encountered a variety of interests among students. However, only 4% of students showed an interest to work in “La Colosa”. Figure 4 depicts the noticeable differences among the students from both schools, although students who want to continue their studies at a university represent the highest percentage in both of the schools.

The perception of the students in regards to the jobs that the mine offers was that these were jobs which do not require formal education. As 44% of the students showed an interest to continue their studies, and taking into account that only 4% students expressed their interest to work on this project, it is possible that the mine does not attract the students in Cajamarca. In fact, there were students who explicitly expressed that they preferred any job, but not to work in “La Colosa”. One of these students expressed *“I will work in something that benefits the community, and doesn’t destroy it”*, and other student said *“I will work in something that really benefits the people”*. This confirms that at least some students perceived “La Colosa” as something negative for their communities.



**Figure 4.** Job interests in the students of Cajamarca.

### 5.1.5 Impacts to the municipality

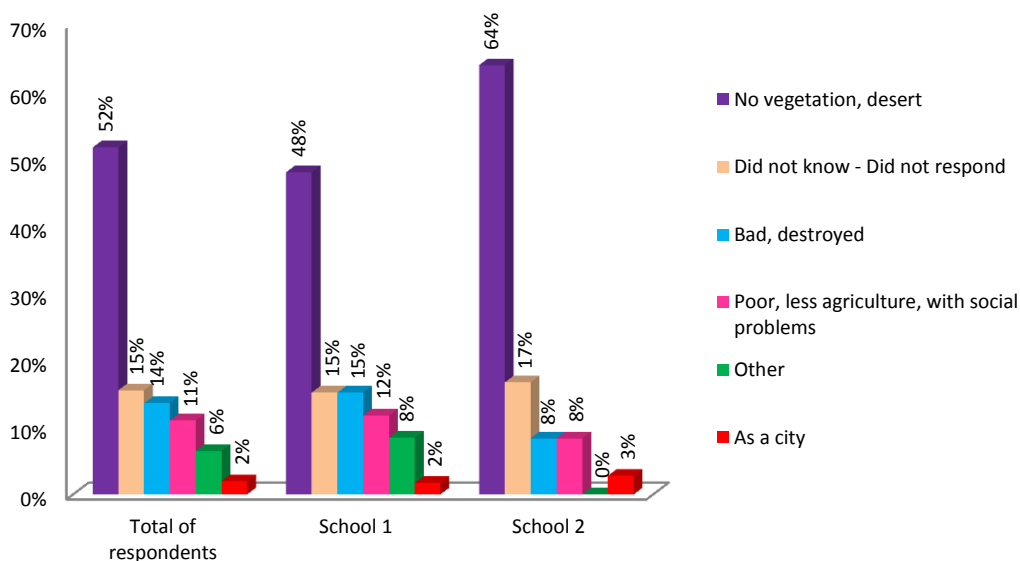
I asked the students about their perception regarding the possibility that "La Colosa" generates changes in Cajamarca. Among their answers I identified seven themes, in four of them students linked "La Colosa" with the generation of negative changes for Cajamarca, in one topic students linked it with positive changes, in another theme they related it to no changes in the municipality, and in the last theme I grouped students who didn't answer the question. When I summed up the four themes in which students related "La Colosa" with negative impacts to Cajamarca, I could see that 79% of the students perceived that the mine could generate negative impacts to the municipality. With a remarkable contrast only 7% of the students mentioned that the mine could generate positive changes for Cajamarca and only 4% said it does not generate any change.

As I show in Table 3, 35% of the students mentioned that "La Colosa" will generate negative environmental impacts to Cajamarca. This is consistent with data previously shown in Table 1, in where 29% of the students linked and described "La Colosa" with words related to environmental damage.

**Table 3.** Students' perceptions of the changes that the mine brings to Cajamarca.

| Changes that the mine brings to Cajamarca   | School 1              |                | School 2              |                | Total of respondents | Overall Percentage |
|---|-----------------------|----------------|-----------------------|----------------|----------------------|--------------------|
|   | Number of respondents | Percentage     | Number of respondents | Percentage     |                      |                    |
| Negative environmental impacts  | 40                    | 33,61%         | 15                    | 41,67%         | 55                   | 35,48%             |
| Changes in the economy related to low agricultural production (increased costs, poverty, unemployment ) | 24                    | 20,17%         | 11                    | 30,56%         | 35                   | 22,58%             |
| Other negative changes  | 17                    | 14,29%         | 1                     | 2,78%          | 18                   | 11,61%             |
| Did not respond   | 15                    | 12,61%         | 1                     | 2,78%          | 16                   | 10,32%             |
| Social problems (displacement, crime, prostitution, violence)   | 10                    | 8,40%          | 4                     | 11,11%         | 14                   | 9,03%              |
| Positive changes  | 10                    | 8,40%          | 1                     | 2,78%          | 11                   | 7,10%              |
| It does not bring changes to Cajamarca  | 3                     | 2,52%          | 3                     | 8,33%          | 6                    | 3,87%              |
| <b>Overall Total</b>  | <b>119</b>            | <b>100,00%</b> | <b>36</b>             | <b>100,00%</b> | <b>155</b>           | <b>100,00%</b>     |

I asked the students to describe, in their own words, their vision of Cajamarca in 30 years if the mining project was carried out. Surprisingly, the majority of the students (52%) mentioned that if “La Colosa” was carried out, Cajamarca will become a desert. They also mentioned to imagine Cajamarca to be destroyed (14%), and poor (11%) as a consequence of the gold exploitation. Only 2% of students said to imagine the municipality more developed as a result of the mining project (see Figure 5).



**Figure 5.** Students' vision of Cajamarca in 30 years if there is gold mining.



### 5.1.6 Impacts to the environment

When I asked the students about their perception regarding the possibility that “La Colosa” has an impact to the environment, I found that 95% of students related "La Colosa" to environmental impacts. Of the 5% left, 2% of students considered mining to have no environmental damage and the other 3% did not answer this question. Within the answers which linked the project to a negative environmental impact, I identified six themes (for a better detail see Table 4). With quite similar percentages between the two schools, 40% of students considered that the mine could negatively affect the ecosystem and its inhabitants. Likewise, 28% of students related the mine to damages on water resources. A lower share of students mentioned pollution of air, damages to wildlife, the forest, and other environmental issues.

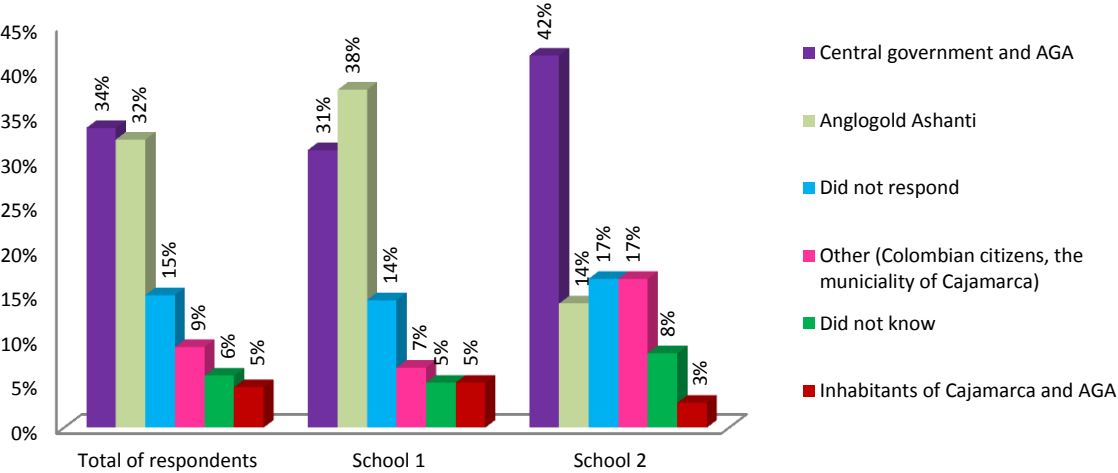
**Table 4.** Students’ perceptions of the impacts that “La Colosa” generates to the environment.

| Damage to the environment                                    | School 1              |                | School 2              |                | Total of respondents | Overall Percentage |
|--|-----------------------|----------------|-----------------------|----------------|----------------------|--------------------|
|  | Number of respondents | Percentage     | Number of respondents | Percentage     |                      |                    |
| It affects the ecosystem and its inhabitants                 | 47                    | 39,50%         | 15                    | 41,67%         | 62                   | 40,00%             |
| Pollution of water sources, droughts and others              | 33                    | 27,73%         | 10                    | 27,78%         | 43                   | 27,74%             |
| Other impacts to the environment (cyanide pollution, others) | 18                    | 15,13%         | 4                     | 11,11%         | 22                   | 14,19%             |
| Air pollution  | 6                     | 5,04%          | 2                     | 5,56%          | 8                    | 5,16%              |
| It affects the fauna and flora                               | 5                     | 4,20%          | 2                     | 5,56%          | 7                    | 4,52%              |
| It affects the forest (cutting of trees)                     | 3                     | 2,52%          | 3                     | 8,33%          | 6                    | 3,87%              |
| Did not know-Did not respond                                 | 4                     | 3,36%          | 0                     | 0,00%          | 4                    | 2,58%              |
| The project does not affect the environment                  | 3                     | 2,52%          | 0                     | 0,00%          | 3                    | 1,94%              |
| <b>Overall Total</b>   | <b>119</b>            | <b>100,00%</b> | <b>36</b>             | <b>100,00%</b> | <b>155</b>           | <b>100,00%</b>     |

Overall, students related “La Colosa” to negative environmental impacts, such as pollution and a decrease of water sources. They also linked the project to social impacts, such as the increase of violence and prostitution. Moreover, students alluded that “La Colosa” affects other local activities in Cajamarca, foremost agriculture. In the same way, although the company promises to generate a large number of jobs, the perception of the students is that the jobs created so far do not require formal education. Jobs that do not require formal education often do not generate greater economic

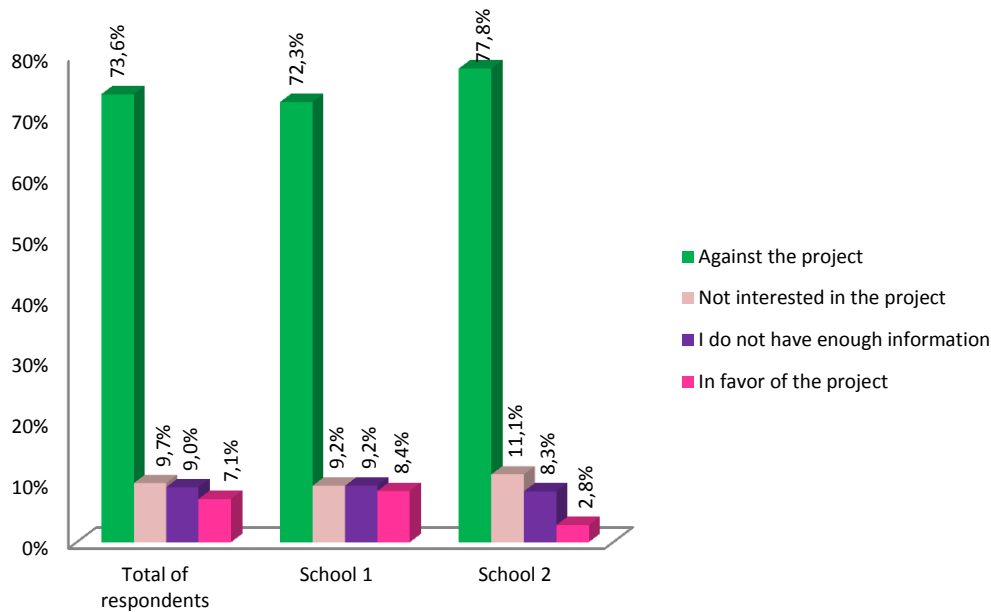
income for the people in Cajamarca. Furthermore, students showed not to be interested in working at “La Colosa”, which may imply that the jobs offered by AGA will be occupied by outsiders. In this manner, students have expressed their concern about the impacts that the mine could generate.

Besides having expressed a negative perception towards “La Colosa” due to the environmental and social impacts, the students of Cajamarca did not perceive the inhabitants of the municipality to be the real beneficiaries of the project. Students perceived AGA and the central government as the main beneficiaries. In fact, only 5% of the students mentioned that this project will benefit the residents of Cajamarca as well as AGA (See Figure 6).



**Figure 6.** Beneficiaries of the mining project. This figure shows the perception of the students regarding who will benefit from the mining project in Cajamarca.

After measuring the perception of the students towards “La Colosa”, I finally asked them about their stance towards the project itself. I encountered that the majority of the students (73%) stated opposition to this project and only 7% of them showed to be in favor of it. Although all students have demonstrated awareness of the project before, 9% of them said they did not have enough information about it and 10% said they were not interested in the subject (see Figure 7). The answers to this last question allowed me to confirm the negative perception students have towards “La Colosa”.



**Figure 7.** Stance towards “La Colosa”. This figure shows the stance of the students towards the mining project.

Overall, although there were no major differences among the students from the different schools, it was apparent that students from School 2, which is located in a rural area, have a worse image of “La Colosa”. Furthermore, a larger share of students from this school thinks that “La Colosa” affects local activities and job opportunities. However, some students in School 1, located in the urban area, mentioned that “La Colosa will not interfere with other local activities, something not manifested by students from School 2. I noticed the major difference among the students when I asked about their job interests. With a percentage of 25%, students from School 2 mentioned their interest to work in something related to the protection of the environment, whereas in School 1, only 7% mentioned this interest. Moreover, 8% of the students of School 2 mentioned their interest to work as farmers.

## 5.2 AGA’s social responsibility

In attempts to improve community resistance to extractive resource activities, gold mining corporations are increasingly adopting Corporate Social Responsibility (CSR) and sustainable development as the cornerstones of their community-based activities (Garvin et al., 2009). The Green paper defined CSR as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis” (Commission of the European Communities, 2002, p. 3). In this sense corporate social responsibility implies the “continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large” (Watts & Holme, 1999, p. 3).

AGA claims to be a responsible company, which respects the environment and supports and promotes human rights in the communities where they are located (AGA, 2010). The company has signed a set of voluntary principles in order to show its commitment to sustainable development and local communities. Signing these voluntary commitments can increase a company's reputation, yet it implies that the company has to work together with the community in order to ameliorate the impacts of its business activities (Garvin, McGee, Smoyer-Tomic, & Aubynn, 2009). In this sense, AGA assures that social aspects are core to their business and that for this reason they have a permanent dialog with the communities tightening the links with local authorities and seeking mutually beneficial relationships (AGA, 2010).

During my interview with AGA's representative, he stated that even though AGA has not started to extract gold yet, the company has already invested in programs that benefit the community of Cajamarca. He ensured that the projects develop by the company are the result of contextual studies, together with permanent consultation with the community. One of AGA's priorities is to foster education as an effective way to break the vicious circle of poverty. In this sense, the company has invested in training workshops for students and teachers to improve the performance in the ICFES examination<sup>11</sup>. Furthermore the company has had different projects with most of the schools institutions in Cajamarca, such as environmental education programs, establishment of greenhouses, as well as programs to enable strengthening the leadership in youth. The educational programs fostered by AGA focus in solid waste management, recycling, risk management and climate change. These programs are supposed to generate environmental consciousness on students.

In the document "Guidelines and good mining practices" the Colombian Ministry of Mines states that social responsibility should be paramount. However, in this same document it also mentions that the "applicability of good mining practices in the mining industry must become a philosophy regarding the actions and performance of mining companies" (Ministerio de Minas y Energía, 2014). Despite recognizing the importance of CSR, the ministry also assures that it is not necessary that good practices are imposed by the government, in order for the companies to give applicability to these guidelines. In this sense, the investment in social projects that AGA makes is entirely voluntarily.

---

<sup>11</sup> Standardized test which qualifies students according to their actual academic skills and affects the possibilities that a student might have to be accepted in College

### 5.3 Analysis of students-AGA relation through Environmental Justice and Political Ecology

Studies of EJ are normally focused in the analysis of distributive justice of activities that are taking place and where environmental problems occur. Considering that “La Colosa” has not yet started extraction activities and therefore it has not created environmental “goods” or “bads”, measuring the distributive justice is difficult at this time. However, as justice not only takes place according to the principals of justice, but also it needs to be ‘seen’ to take place, the perception of the people is important in determining justice (Sen, 2009). As part of its CSR, AGA has invested in programs to improve agricultural and livestock activities, as well as it has invested in improving the structure of the marketplace. Nevertheless, students do not seem to believe that locals could be the beneficiaries of the mining project. Mostly they perceived that AGA or the government will be the main beneficiaries, meanwhile the people of Cajamarca will have to bear the damages cause by the mining activities. In fact, one student referred to La Colosa as *“a fund of income to the country but a risk to the town”*. The answers given by the students showed that they are aware of the income that the gold mining could generate, however, for them this income will not be distributed equally. As stated by Wan (2014), perceptions of misrecognition by the “victims” are important indicators of injustice. In other words, considering the perception of the students, there is a great likelihood of environmental injustice once this project is developed.

Usually, monetary benefits or compensations are treated as a justification for uneven distribution of environmental burdens (Shrader-Frechette, 2002). However, in cultural valuation terms, these monetary values will not compensate the cultural and aesthetical value that the natural resources represent for the people. In other words, monetary values fail to consider local communities’ values, want or needs (Wan, 2014). AGA has invested in programs that aim to create environmental awareness in students. Paradoxically, when analyzing the perception that students have towards “La Colosa”, I noticed that students do not see AGA as a company concerned about the environment, but instead they perceive AGA as a destructive and irresponsible company which arrived in Cajamarca to steal their natural resources. In fact, some students expressed that the income generated by the company would not compensate the damage that AGA will have on the environment. As an example one of the students stated, *“even if they (referring to AGA) generate money, this means nothing because they want to remove from us the most precious thing...nature”*. With different expressions such as *“I don’t want to see our beautiful mountains disappear”* and *“La Colosa project will harm our culture by destroying our landscape”*, students have shown to have a cultural and aesthetical appreciation for the environment. In this sense, and considering that cultural values are usually

impossible to compensate for, the relation among students and the company evidences environmental injustice.

The thought that distributive justice is enough to achieve EJ could mislead one to believe that the investment that companies have on community projects, as well as the compensation that they offer to the affected communities, are enough for achieving equality and therefore the realization of environmental justice (Lee, 2009). However, as it was show by Wan (2014), misdistribution is not the only injustice hidden in a relation among the mining companies and local communities. She showed that these relations are normally characterized by procedural injustices, as communities are misrecognized or are not able to participate in decision making. Analyzing the societal context in which a company and community relation is developed uncovers hidden injustices (Lee, 2009).

One important issue to take into account into the students-AGA relationship is the political context in which the relation is developed. The constitution of Colombia establishes that the subsoil belongs to the State. Furthermore, the mining code in Colombia specifies that minerals of any kind and location are the exclusive property of the State without regard to who owns the relevant land, whether if it is from other public entities, individuals, communities or groups. In other words, the decision to allow the extraction of a mineral resource is done only by the State, and does not require consultation of the communities surrounding the project. The only communities considered for consultations are indigenous or people of African descent. The students of Cajamarca are thus denied the opportunity to decide about the future of their land. Furthermore, even in the case that the communities were consulted before the decision of developing a mining project; students are not allowed to participate, as they are not entitled to vote because they are underage.

Exclusion from decision-making is a form of marginalization (Ballard & Banks, 2003). The misrecognition of the students' in the decision making of the project implies that the Government of Colombia has imposed this mining project to the students. Students were not asked about their job expectations and so the government is taken for granted that students will consider mining as a job opportunity. In this sense, not considering students expectations is imposing a reduce mode of being, which according to Wan (2014) could be harmful for the community. The decision making process of carrying out mining extraction in Colombia is evidence for the power relations involved in this type of project. As the government is the only one in power to decide the about the extraction of mineral resources, the company can directly negotiate with it, ignoring the participation of other stakeholders in this decision (in this context, ignoring the participation of the students). In this sense,

the relation among the students and AGA show inequality in the power relations and therefore it also evidence environmental injustice.

Interpreting the causes of the perception of the students about the project is also helpful to understand relationship between the students and AGA. Olsson (2011) stated that children are influenced directly by their interaction with their peers, parents and teachers, and indirectly by the societal context in where they develop. In this sense, The perception of the students regarding the mine is the result of the continuous interaction they have with other people and with the environment. AGA's representative stated that the relationship between the company and the students has been obstructed by a few teachers. According to him, some teachers have initiated opposition to the mining project in the students. However as I did not study the relation between students and teachers, I couldn't measure to what extent the teachers had created or exacerbated the mostly negative perspective that the students have towards the project. Nevertheless, teachers are adults whom students meet on regular basis in their daily lives and who might serve as role models and mentors for the students (Olsson, 2011). Furthermore, considering that adults are more mature and have greater weight in determining the quality of the relationship with the students; teachers could have a great influence on students' perceptions (Pianta, 1999). Further studies will be needed to analyze this situation.

Another factor that could have influenced the students' perceptions towards "La Colosa" is the direct interaction with AGA through the projects that the company has in the schools. However, these projects are dependent on the willingness of the principals to allow the development of such activities in the schools. AGA's representative mentioned that the activities in School 1 had to be suspended for two years as the principal did not provide the company with the space and time to develop their activities. Nevertheless, as there was a change in the school directives, AGA has renovated their activities in this school and students have participated in the educational projects of the company. In school 2 on the other hand, the activities have been suspended since 2011, as the principal refuses to accept AGA's projects due to a request made by teachers and parents. The fact that the company has not been able to interact with the students on School 2 may explain their slightly higher rejection to the project, when compared to the students' perception in the School 1.

Apart from the information that students receive in the schools the information found in the media could also influence students' perception towards "La Colosa". Academics as well as NGOs have reported the possible environmental impacts which Cajamarca might face in the event of an open pit

gold mining (Corredor Gil, 2014). In these reports, an important reference is made to the possibility of a competition for water resources due to the high amounts of water needed for the extraction of gold, and the pollution that the mining activities generate in the water (Colombia Solidarity Campaign, 2013; Pax Christi, 2009). This information is the same that the opposition uses in its speeches against the mine, so it is very likely that students have adopted that thought after having heard it on the streets or at the demonstrations against the mine. The fact that 52% of the students mentioned that Cajamarca will become a desert if there is open pit mining gold in the municipality confirms the importance that the media has on students' perceptions.

Considering that the students are easily denied to interact with the company in charge of the project, and also considering that the information found in the media is mostly diffused by AGA or by groups opposed to the project, it is noticeable that students do not have access to objective information. If the students were part of the decision-making process about gold mining in Cajamarca, the access to relevant information would be essential to achieve fair outcomes in which students could objectively express their stand towards the project. However, as this is not the case, the relation among students and the company exposes procedural injustice.

Overall, the relationship between students and AGA hides different injustices. Firstly, students are excluded from the decision-making concerning the extraction of gold in Cajamarca. Secondly, students do not have access to objective information. Thirdly, students are imposed to a "reduce mode of being". Finally, the cultural value of natural resources for students is not considered when deciding about the future of the mine.

## **6. Discussion**

Similar to Browne, Garst, and Bialeschki (2011) my results show that environmental issues, such as conservation, climate change and biodiversity are popular concerns among today's youth. The interviewed students showed concern regarding the environmental impacts that mining will generate in their community. As a matter of fact, some students related these environmental impacts to the decrease in agriculture, which will consequently affect the economy in Cajamarca. A large number of students mentioned that Cajamarca will become a desert if mining will be carried out. Although this view is a bit extreme, it is certain that mining activity can cause major environmental complications which in turn can render land unsuitable for farming. As agriculture is the main economic activity in this municipality, I consider that there is a high possibility of the



emergence of conflicts between the mining company and community groups. As explained by Vélez, Ramos, and Alayón (2011), conflicts emerge when at least two people have interests, needs and expectations related to the use or management of a resource which may be scarce or its use may decrease the possibility from others to benefit. Furthermore, although the students interviewed did not show a major interest in working as farmers, the loss of farmland, water and plantations would imply that the future generations could not have the opportunity to work as subsistence farmers, having intergenerational implications in this community.

The interviewed students also mentioned that “La Colosa” threatens job opportunities in Cajamarca. Moreover, they showed to not have any interest of working in this project. If these two factors are combined, not only will there be less work in the municipality, but also the job offered (in this case working at the mine) would not be relevant to the students of Cajamarca and would thus be occupied by people from another region. Furthermore, students’ perceptions are that there is no need for high level education to work at the mine. In this regard, AGA is not encouraging the students to continue their studies, which completely contradicts their priority of fostering education to break the circle of poverty.

Malone (2001) reported that youths no matter where they grow up in the world have nearly the same wishes. Two of these wishes are that youth want to have access to a clean environment where they can connect with nature and that they want to collaborate with adults to make the world a better place for all. In this sense and considering that the mine will directly affect youths’ quality of life, in my opinion, youths’ perceptions regarding “La Colosa” has to be taken into account when the future of the mine is decided. SPW/ DFID-CSO Youth Working Group (2010) stated that “the Young people are the foundations for effective development and if engaged they will improve many of the structural development challenges that we face today including: enhancing the cohesion of families and communities, reducing health risks and advancing livelihood opportunities”. In other words, youth participation makes policy processes more transparent and accountable towards young people (EACEA, 2013). In this sense, the government of Colombia should recognize the capacity for youth to be authentic and essential participants in planning, development and implementation processes. I share the thought of Malone (2001, p. 8) that “the relationship between sustainable development and children’s lives is not just about adult roles as stewards and their capacity to act on behalf of the child—it is also about recognizing the capacity for children and youth to be authentic participants in planning, development and implementation processes”.

Considering that in a relation between youth and adults (the latter one having greater weight in determining the quality of the relationship and therefore more probabilities to influence the former's thoughts), it is possible that students' perceptions in this study reflect the thoughts of their parents and teachers. Furthermore, if we consider that children are influenced directly by the social relations they form with their peers, parents and teachers, as well as indirectly by the societal context in where they develop, it is also likely that students' perceptions represent to a large extent the perception of the community. In this sense, my findings are in line with those reported by Garvin et al. (2009) in which local residents fear economic, social and environmental impacts of mining. Furthermore, the perception that the students have about the unequal distribution of mining benefits, supports Ballard and Banks (2003) argument that local communities are fundamentally concerned with questions of control over their own destinies in terms of the management of projects, the flow of benefits and the limitation or redistribution of mining impacts.

The conflicts created by mining are more severe in developing countries where governmental intervention is minimal and the regulatory frameworks are commonly incomplete (Hilson, 2002). In Colombia mining resources belong to the State and are considered a public interest. With this premise, the allocation of areas for mining exploration in Colombia has been done without taking into account the wants and needs of the local communities, giving prevalence to mining over other land uses and leading to social problems (CGR, 2013). As it is impossible to separate soil from the subsoil, the full power of the State over the subsoil and mining resources led regional government entities to lose their regulatory power over the soil, in places where the state has granted mining concessions. In this sense, although it is their competence to regulate the land use, regional entities cannot regulate mining activities in their territories, even if they threaten to affect the environment and society. However, if the subsoil belongs to the State, this means that it belongs to the society as a whole, and so the interests of one sector cannot prevail over others (Guerrero, 2009). Besides, as the minerals cannot be accessed without interfering with the environment or, in the case of open pit mining in particular, the vegetation cover, communities have to be considered in the decisions regarding mining projects that could affect their livelihoods and wellbeing. As stated by Guerrero (2009), the access to the subsoil has to respect the socioeconomic and environmental principles that have the same constitutional support than mining.

Considering that the mining sector has been associated with human rights violations as well as the impacts on human health and impacts to the territory (Saha et al., 2011), it is of concern that the Colombian government does not require companies to make a binding commitment to the society,

and that the investments that the company has in the area, are left to their free will. It is even more worrisome when you take into account that AGA has shown social irresponsibility in other countries where it operates (Colombia Solidarity Campaign, 2013).

Although AGA has invested in programs supporting the development of Cajamarca, it is questionable whether these initiatives constitute genuine recognition of the importance of corporate integrity, or if they are simply extending its corporate public relations in the search for comparative advantage within the industry (Ballard & Banks, 2003). The company could be influenced by international and institutional trends in industry that promote the adoption and integration of CSR (Garvin et al., 2009). Furthermore, the company could also be interested in getting a “social license to operate<sup>12</sup>”. As stated by Jamali and Mirshak (2007), CSR is also conceived as a license for continued operation and appreciation by society. If indeed AGA disregards communities concerns, this may contribute to disagreements between the community members and the company. Equally, if the expectations about the benefits of mining, such as the creation of jobs, roads and schools are not fulfilled, this can lead to growing misunderstandings, mistrust and eventually conflict among local residents and the mining company (ELAW, 2010; Garvin et al., 2009). Switzer (2001) suggested that mining could become a source of conflict over the control of resources and resource territories, as well as for the right to participate in decision making and benefit sharing. My case has shown that the communities in where a mining project will be developed tend to feel excluded from the benefits of the project and therefore oppose to them, creating a conflict between the mining company and the locals.

## 7. Conclusion

The Colombian National development plan makes clear that the government aims to pursue an extractive-led development trajectory in the immediate future and the years to come, in which mining is the main focus. Indeed, due to the reformed mining policies, mining activities have increased in much of the country. However, the extent to which mining “benefits” actually benefit local communities is still unclear. Due to the specific socio-economic and cultural characteristics of the different regions where mining takes place, it is important to analyze this topic with objectivity and integrity.

---

<sup>12</sup> ‘Social license to operate’ is unofficially granted by local communities and serves as a ‘checks and balance’ system to ensure a good relation- ship between the mining industry and local communities (Morrice & Colagiuri, 2013).

Through the case study of “La Colosa” gold mine, I analyzed the context in which company and communities relations are formed, providing a foundation from which to consider how mining projects impact communities. As previous studies have mainly focused in problematizing the unequal distribution of costs and benefits in mining projects, I approached the mine-student relationship from the political ecological perspective, analyzing the social structure, social relations and social construction. Political ecology allowed me to discover four hidden injustices in the relationship between students and AGA. Students do not have access to objective information, their cultural values are not considered, they are excluded from the decision-making about the extraction of gold in Cajamarca and they are being forced into a “reduced mode of being”.

Ideally, identifying community attitudes, perceptions and expectations should be undertaken during the planning stage of a project, in order to avoid misunderstandings and future conflicts. However, in this study it was shown that students’ perceptions are considered neither by the mining company nor by the government, even though students’ quality of life will be directly affected by this project. As students’ wills are not being considered in the decision making of this project, this could easily lead to growing misunderstandings, and eventually conflicts between the students and the company.

## **8. Reflections and suggestions for further research**

If the government of Colombia continues fostering mining as an engine of development, it needs to recognize that mining will affect the social and cultural structure of the local communities, and include these impacts in the decision-making processes. Furthermore, there is an urgent need to establish a ‘social license’ as a requirement for mining activities. This social license should meet the respect for environmental rights, territorial, social, economic, cultural and overall human rights of the populations affected by mining projects. This activity will ensure that consultation, participation and dialogue are maintained in the design and implementation of mining projects. The participation of the local community in planning will be important to reduce tension and to create process more accountable for the community.

As this study only shows the perception of a small portion of the community, further studies will be needed in order to analyze the perception of the society as a whole. Moreover, as the relations of the community and the company are dependent on the context of the society, it is also important to analyze the relations among the society groups. Furthermore, there is a need to study the information sources in order to know if the community has access to objective information.

## 9. References

- Anglogold Ashanti-AGA. (2010). Reporte a la sociedad, oro sostenible. from <http://www.anglogoldashanti.com.co/saladeprensa/Informes/Reporte%20a%20la%20sociedad,%20Oro%20sostenible%202010.pdf>
- Anglogold Ashanti-AGA. (2011). Investor Site Visit November, 2011. from <http://www.anglogoldashanti.com/en/Media/Presentations/ColombiaInvestersiteVisitDay1-2011.pdf>
- Anglogold Ashanti-AGA. (2014). Verdadera minería. from <http://www.anglogoldashanti.com.co/saladeprensa/Reportes/Verdadera%20Miner%C3%ADa%202014%20%E2%80%93%20AngloGold%20Ashanti%20Colombia.pdf>
- Arango Mendoza, J. A. (2014). *Proyecto de minería de oro la Colosa, Identificación ambiental de la zona de explotación y sus Impactos*. Pontificia Universidad Javeriana, Bogotá.
- Ballard, C., & Banks, G. (2003). Resource Wars: The Anthropology of Mining. *Annual Review of Anthropology*, 32, 287-313.
- Bebbington, A., Humphreys Bebbington, D., Bury, J., Langan, J., Muñoz, J. P., & Scurrah, M. (2008). Mining and Social Movements: Struggles Over Livelihood and Rural Territorial Development in the Andes. *World Development*, 36(12), 2888-2905. doi: 10.1016/j.worlddev.2007.11.016
- Bendassolli, P. F. (2013). Theory Building in Qualitative Research:Reconsidering the Problem of Induction. *Forum: Qualitative Social Research*, 14(1), 1-20.
- Bridge, G. (2004). Contested terrain; mining and the environment. *Annual Review of Environment and Resources*, 29, 205-259.
- Browne, L. P., Garst, B. A., & Bialeschki, M. D. (2011). Engaging Youth in Environmental Sustainability: Impact of the Camp 2 Grow Program. *Journal of Park & Recreation Administration*, 29(3), 70-85.
- Bryman, A. (2008). *Social research methods* (3 ed.): Oxford : Oxford University Press.
- Carson, D. (2001). *Qualitative marketing research*. London SAGE.
- Colombia Solidarity Campaign. (2013). *La Colosa: a Death Foretold Alternative Report about the AngloGold Ashanti Gold Mining Project in Cajamarca, Tolima, Colombia*. London: BM Colombia Solidarity Campaign.
- Commission of the European Communities. (2002). *Communication from the commission concerning corporate social responsibility: a business contribution to sustainable development*: Commission of the European Communities.
- Contraloría General de la República-CGR. (2013). *Minería en Colombia: Derechos, políticas públicas y gobernanza*.
- Corredor Gil, D. C. (2014). *Estrategias de control ciudadano: una aproximación a la intervención megaminería en Cajamarca Tolima.(2007-2013)*. Universidad Colegio Mayor de Nuestra Señora del Rosario, Bogotá. Retrieved from <http://repository.urosario.edu.co/handle/10336/5057>

- CORTOLIMA. (2010). *Caracterización del Área de Influencia de La Colosa*. Ibagué: Corporación Autónoma Regional del Tolima.
- DANE. (2005). Estimación y proyección de población nacional, departamental y municipal total por área. from <http://www.dane.gov.co/index.php/poblacion-y-demografia/proyecciones-de-poblacion>
- de Vreede, C., Warner, A., & Pitter, R. (2014). Facilitating Youth to Take Sustainability Actions: The Potential of Peer Education. *Journal of Environmental Education*, 45(1), 37-56.
- EACEA. (2013). *EACEA 2010/03: Youth Participation in Democratic Life*. London: LSE Enterprise.
- ELAW. (2010). *Guía Para Evaluar EIAs de Proyectos Mineros*. Eugene, U.S.A.
- Environmental Protection Agency. (2015). Environmental Justice. from <http://www.epa.gov/environmentaljustice/>
- FEDESARROLLO. (2008). *La minería en Colombia: Impacto socioeconómico y fiscal*. Retrieved from <http://lasillavacia.com/sites/default/files/mineropedia/la-mineria-en-colombia-informe-de-fedesarrollo-2008.pdf>
- Fierro, J. (2012). *Políticas mineras en Colombia*. Bogota: Instituto para una Sociedad y un Derecho Alternativos ILSA.
- Flick, U. (2009). *An introduction to qualitative research* (4 ed.). London: SAGE.
- Gable, G. G. (1994). Integrating case study and survey research methods: an example in information systems. *European journal of information systems*, 3(2), 112-126.
- Garvin, T., McGee, T. K., Smoyer-Tomic, K. E., & Aubynn, E. A. (2009). Community–company relations in gold mining in Ghana. *Journal of Environmental Management*, 90, 571-586. doi: 10.1016/j.jenvman.2007.12.014
- Guerrero, E. (2009). Implicaciones para la minería en los páramos de Colombia, Ecuador y Perú *Documento de trabajo, Proyecto Páramo Andino, Condesan*.
- Harden, C. P. (2012). Framing and Reframing Questions of Human-Environment Interactions. *Annals of the Association of American Geographers*, 102(4), 737-747. doi: 10.1080/00045608.2012.678035
- Hepburn, A. (2009). Constructionism. In V. Jupp (Ed.), *The Sage dictionary of social research methods* (pp. 38-40). London: Sage Publications Ltd.
- Hilson, G. (2002). An overview of land use conflicts in mining communities. *Land Use Policy*, 19(1), 65-73. doi: 10.1016/S0264-8377(01)00043-6
- Holliday, A. (2007). *Doing and writing qualitative research. [Elektronisk resurs]* (2 ed.). London SAGE.
- Idárraga Franco, A., Muñoz Casallas, D. A., & Vélez Galeano, H. (2010). *Conflictos socio-ambientales por la extracción minera en Colombia: casos de la inversión británica*. Bogotá: CENSAT Agua Viva.
- International Committee of the Red Cross. (2015). Rule 1. The Principle of Distinction between Civilians and Combatants. from [https://www.icrc.org/customary-ihl/eng/docs/v1\\_cha\\_chapter1\\_rule1](https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter1_rule1)

- Jamali, D., & Mirshak, R. (2007). Corporate Social Responsibility (CSR): Theory and Practice in a Developing Country Context, *72*, 243-262.
- Keeling, A., & Sandlos, J. (2009). Environmental justice goes underground? historical notes from Canada's northern mining frontier. *Environmental Justice*, *2*(3), 117-125. doi: 10.1089/env.2009.0009
- Kelley, K., Clark, B., Brown, V., & Sitzia, J. (2003). Good practice in the conduct and reporting of survey research. *International journal for quality in health care*, *15*(3), 261-266.
- Lee, H. (2009). *The Political Ecology of Environmental Justice: Environmental Struggle and Injustice in the Yeongheung Island Coal Plant Controversy*. Florida State University.
- Lor, P. (2011). Preparing for research: meta-theoretical considerations. *International & Comparative Librarianship*, 04-15.
- Malone, K. (2001). Children, Youth and Sustainable Cities. *Local Environment*, *6*, 5-12. doi: 10.1080/13549830120024215
- Martínez Rivillas, A. (2009). *Estudio general de riesgos integrales del proyecto de exploración y explotación minera La Colosa, Colombia*.
- Meinhold, J. L., & Malkus, A. J. (2005). Adolescent Environmental Behaviors. Can Knowledge, Attitudes, and Self-Efficacy Make a Difference? *Environment and Behavior*, *37*(4), 511-532.
- Resolución Número (1481), 30 de julio de 2010 "Por la cual se impone una sanción y se toman otras determinaciones" (2010).
- Ministerio de Minas y Energía. (2014). *Lineamientos de buenas practicas mineras*. Bogotá.
- Morrice, E., & Colagiuri, R. (2013). Coal mining, social injustice and health: A universal conflict of power and priorities. *Health and Place*, *19*(1), 74-79. doi: 10.1016/j.healthplace.2012.10.006
- Müller, M., & Clayton, S. (2013). Introduction to 'Environmental Justice'. *Social Justice Research*, *26*(3), 227-230. doi: 10.1007/s11211-013-0194-y
- Muradian, R., Martinez-Alier, J., & Correa, H. (2003). International capital versus local population: The environmental conflict of the Tambogrande Mining Project, Peru. *Society and Natural Resources*, *16*(9), 775-792. doi: 10.1080/08941920309166
- OCMAL. (2014). Mapa de conflictos mineros, proyectos y empresas mineras en América Latina. from [http://basedatos.conflictosmineros.net/ocmal\\_db/](http://basedatos.conflictosmineros.net/ocmal_db/)
- Olsson, E. (2011). *Social relations in youth. [Elektronisk resurs] : determinants and consequences of relations to parents, teachers, and peers*. (Theses), Stockholm University, Stockholm Retrieved from <http://ludwig.lub.lu.se/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=c at01310a&AN=lovisa.001984276&site=eds-live&scope=site> Available from EBSCOhost cat01310a database.
- Pax Christi. (2009). Informe de Pax Christi sobre el proyecto minero de AGA en Cajamarca. *Organización No Gubernamental de Derechos Humanos*, 68.

- Pianta, R. C. (1999). How the parts affect the whole: Systems theory in classroom relationships *Enhancing relationships between children and teachers*. (pp. 23-43). Washington, DC, US: American Psychological Association.
- Ley 375 de Julio 4 de 1997, Por la cual se crea la ley de la juventud y se dictan otras disposiciones (1997).
- Ley 685 de 2001, por la cual se expide el Código de Minas y se dictan otras disposiciones (2001).
- Robbins, P. (2004). The Hatchet and the seed. *Political ecology*, 3-16.
- Saha, S., Pattanayak, S. K., Sills, E. O., & Singha, A. K. (2011). Under-mining health: Environmental justice and mining in India. *Health and Place*, 17, 140-148. doi: 10.1016/j.healthplace.2010.09.007
- Santos, J. (2010). Plan nacional de desarrollo 2010-2014. *Prosperidad para Todos*, Bogotá.
- Sen, A. (2009). *The idea of justice*. London: Allen Lane an imprint of Penguin books.
- Shrader-Frechette, K. S. (2002). *Environmental Justice: Creating Equality, Reclaiming Democracy (Environmental ethics and science policy series)*. Oxford: Oxford University Press.
- SPW/ DFID-CSO Youth Working Group. (2010). Youth Participation in Development: Summary Guidelines for Development Partners. from <http://social.un.org/youthyear/docs/policy%20guide.pdf>
- Stake, R. E. (2000). Case studies. In Y. S. L. Norman K. Denzin (Ed.), *Handbook of qualitative research* (2 ed., pp. 435-454). Thousand Oaks, Calif: Sage Publications.
- Switzer, J. (2001). Armed conflict and natural resources: The case of the minerals sector *International Institute for Environment and Development*. London.
- Tellis, W. (1997). Application of a case study methodology. *The qualitative report*, 3(3), 1-17.
- Unidad de Planeación Minero Energética-UPME. (2006). *Colombia país minero Plan nacional para el desarrollo minero, visión 2019*. Retrieved from [http://www.upme.gov.co/Docs/PNDM\\_2019\\_Final.pdf](http://www.upme.gov.co/Docs/PNDM_2019_Final.pdf).
- Unidad de Planeación Minero Energética-UPME. (2015a). Catastro Minero Nacional y Registro Minero Nacional. from <http://www.simco.gov.co/Inicio/CatastroMineroColombiano/tabid/107/Default.aspx>
- Unidad de Planeación Minero Energética-UPME. (2015b). Historico de Producción de Oro. from [http://www.upme.gov.co/generadorconsultas/Consulta\\_Series.aspx?idModulo=4&tipoSerie=116&grupo=355&Fechainicial=01/01/1931&Fechafinal=31/12/2013](http://www.upme.gov.co/generadorconsultas/Consulta_Series.aspx?idModulo=4&tipoSerie=116&grupo=355&Fechainicial=01/01/1931&Fechafinal=31/12/2013)
- Unidad de Planeación Minero Energética-UPME. (2015c). Inversión Extranjera Directa. from <http://www.simco.gov.co/simco/Estad%EDsticas/Inversi%F3nExtranjera/tabid/124/Default.aspx>
- United Nations. (1992). *Agenda 21, Rio Declaration*. New York: United Nations.
- Urkidi, L., & Walter, M. (2011). Dimensions of environmental justice in anti-gold mining movements in Latin America. *Geoforum*, 42, 683-695. doi: 10.1016/j.geoforum.2011.06.003



- Vargas Alba, D. (2011). *Ecos de la minería: reportaje sobre las manifestaciones de acción colectiva en la Colosa Cajamarca*. Pontificia Universidad Javeriana, Bogotá. Retrieved from <http://repository.javeriana.edu.co/bitstream/10554/5733/1/tesis795.pdf>
- Vélez, M. A., Ramos, P. A., & Alayón, L. (2011). Instituciones anidadas para prevenir y resolver conflictos socio-ambientales: manejo y distribución del agua en Campo Alegre (Huila, Colombia). *Cuadernos de Desarrollo Rural*, 8(67), 71-90.
- Villar Gómez, L. (2013). *El sector minero en Colombia: Impactos macroeconómicos y encadenamientos sectoriales*. Paper presented at the II Congreso del Sector de la Minería a Gran Escala (SMGE) "Minería Responsable Aliada del Desarrollo de Colombia", Cartagena.
- Wan, P. M. J. (2014). Environmental justices and injustices of large-scale gold mining in Ghana: A study of three communities near Obuasi. *The Extractive Industries and Society*, 1, 38-47. doi: 10.1016/j.exis.2013.12.001
- Watts, P., & Holme, L. (1999). *Meeting changing expectations: Corporate social responsibility*. Geneva: World Business Council for Sustainable Development.
- Weber-Fahr, M. (2002). Treasure or trouble? Mining in developing countries. *World Bank and International Finance Corporation, Washington DC*.
- Weber, R. (2004). Editor's Comments: The Rhetoric of Positivism versus Interpretivism: A Personal View, iii.
- Yin, R. K. (2003). *Case study research : design and methods* (4 ed.). London SAGE.

## Appendix 1. Structure of Students' survey

### *Información general*

- a. Genero
- Masculino
  - Femenino
- b. Edad \_\_\_\_\_
- c. Hace cuanto vive en esta área?
- 0-5 años
  - 5-10
  - 10-15
  - Toda la vida

### *Asuntos específicos de la minería*

- a. Sabe algo acerca de los proyectos mineros en esta región?
- Si
  - No
- b. Conoce el nombre del proyecto y porque esta mina está siendo propuesta?
- c.Cuál es la primera palabra que viene a su mente cuando piensa en el Proyecto "La Colosa"
- d. Como describe usted el Proyecto "La Colosa"?
- e.Cuál es su posición frente al proyecto minero?
- A favor
  - En contra
  - No tengo suficiente información
  - No me interesa
- f. Cree usted que las actividades de la mina interfieren con otras actividades locales, por ejemplo agricultura etc.? Si es así, como cree que interfieren?
- g. Cree usted que las actividades de la mina afectan al medio ambiente? De ser así, como cree que lo afecte?

- h. Conoce usted las oportunidades laborales en Cajamarca? Si es así, cuales son los trabajos más comunes en el área?
- i. Basado en la pregunta anterior, cree usted que estas ofertas laborales serán iguales si el Proyecto minero empieza fase de explotación?
- La oferta será igual
  - Abra mayor número de ofertas
  - La oferta disminuirá
- j. Le interesa trabajar en el Proyecto “La Colosa”? si su respuesta es no, en que aspira trabajar
- Si,
  - No, en que aspira trabajar? \_\_\_\_\_
- k. Cree usted que para trabajar en la mina se necesita algún nivel de escolaridad?
- Si, Cuál? \_\_\_\_\_
  - No
- l. Cree usted que la mina traería cambios para Cajamarca, de ser así, que tipo de cambios?
- m. Si el proyecto minero “La Colosa” inicia fase de explotación, cómo ve usted a Cajamarca en 30 años?
- n. Si el proyecto se llevara a cabo, quien cree usted que serán los principales beneficiarios? (Tiene la opción de escoger varias opciones si así lo considera).
- Habitantes de Cajamarca
  - Gobierno central
  - Municipio de Cajamarca
  - Anglo Gold Ashanti
  - Todos los Colombianos
  - No se

## Appendix 2. Interview guide

a. Cuales son las demandas del gobierno en relación con la responsabilidad social de la empresa?. Existe alguna relacionada con el sector educativo?

b. Ha invertido la compañía en el desarrollo de la comunidad educativa de Cajamarca?

Si

No

c. Qué tipo de proyectos ha realizado o piensa realizar la empresa con la comunidad educativa?

d. Como caracteriza usted la relación con la comunidad educativa de Cajamarca

Positiva

Negativa

e. Enuncie los aspectos positivos y/o negativos de la relación con los diferentes integrantes de la comunidad educativa cajamarcuna ante la presencia de la empresa en el área.

|             | Positiva | Negativa |
|-------------|----------|----------|
| Profesores  |          |          |
| Estudiantes |          |          |
| Directivos  |          |          |