

# The effects of major coal mining on Colombia: A two perspective discussion

Efectos de la gran minería de carbón en Colombia: Los efectos de la gran minería del carbón en Colombia: una discusión desde dos perspectivas

COLCIENCIAS TIPO 2. ARTÍCULO DE REFLEXIÓN

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Guy Henderson

[ghenerson@ean.edu.co](mailto:ghenerson@ean.edu.co)

Andrea González Lizarazo

[agonzalez.d@ean.edu.co](mailto:agonzalez.d@ean.edu.co)

Andres Orlando Plata Blanco

[oplatabl2681@ean.edu.co](mailto:oplatabl2681@ean.edu.co)

Escuela de Administración de Negocios EAN, Bogotá-Colombia

## Abstract

Coal mining is a lucrative economic sector in Colombia. Large multinational companies reap massive profits from extracting coal in large quantities and exporting it all over the globe. This article aims to explore the benefits and problems that this business sector has brought to Colombia. It does this in the form of a discussion from two different perspectives on the impact of coal mining: one focuses on the positive aspects and the other the negative. The purpose of the article is not to provide an exhaustive resource on the topic but rather to present some of the current key arguments for further research and analysis.

## Keywords

Coal mining; Colombia; multinationals; CSR; royalties.

## Resumen

La minería del carbón es un sector económico lucrativo en Colombia. Las grandes empresas multinacionales cosechan enormes beneficios a partir de la extracción y explotación de carbón de grandes cantidades en todo el mundo. Este artículo tiene como objetivo explorar los beneficios y problemas que este sector empresarial ha traído a Colombia. Lo hace en forma de una discusión desde dos perspectivas diferentes sobre el impacto de la minería del carbón: una se centra en los aspectos positivos, la otra en los negativos. El propósito de este artículo no es proporcionar un recurso exhaustivo sobre el tema, sino más bien para presentar algunos de los actuales argumentos claves para la investigación y análisis.

## Palabras Clave

Minería del carbón; Colombia; multinacionales; RSE; regalías.

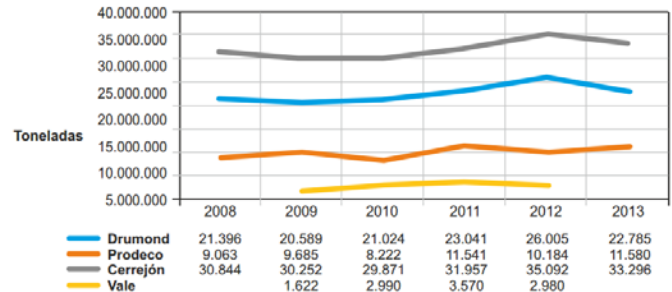
## I. INTRODUCTION

The article is primarily a discussion of the effect large scale coal mining has on Colombia. It is presented as a discussion of two opposing opinions between a university student and two university lecturers. The piece begins with short descriptions of the coal industry and that industry in Colombia. It then goes on to provide a definition of Corporate Social Responsibility [CSR] which is the yardstick with how the behavior of the coal mining industry in Colombia is measured in the text. The first section provides evidence of how Colombia benefits from coal mining in the form of royalties, CSR programs implemented by the corporations involved and how the country can remedy damages and encourage good behavior on the part of the coal industry through the implementation of fines and penalties. This perspective is counterbalanced by a second point of view which argues that in spite of the benefits outlined there are also several problems which are consequences of coal mining in the country. This side of the argument examines cases of health issues, environmental damage and community displacement. It also provides a general criticism of the effectiveness of the allocation of royalties provided by the industry and that of the role of government as the arbiter between the coal mining industry and Colombian society. The article does not attempt to be conclusive as to whether the coal mining industry is more of a positive or negative for Colombia. Rather the point is to present evidence and analysis for the reader to have a better understanding of the larger debate and to encourage further, more profound investigation of the issues broached.

## II. COAL IN THE WORLD AND IN COLOMBIA

According to the World Coal Association (2014) “Coal provides around 30.1% of global primary energy needs, generates over 40% of the world's electricity and is used in the production of 70% of the world's steel”. The association also cites Colombia as one of the top 5 coal exporters and in the top ten for coal (steam variety) exportation. Coal is a major economic asset in Colombia illustrated by the graph below. Figure 1 lists the coal extraction levels in Colombia by major coal mining companies in tons. It is worth noting that Colombian “coal production in the last ten years has had an average annual growth of 8%” (Encolombia, 2013).

Figure 1. Coal extraction in Colombia (Hawkins, 2014, p.28)



## III. CORPORATE SOCIAL RESPONSIBILITY

The purpose of the article is to outline the benefits and problems of major coal mining operations in Colombia. Therefore, the point of analysis is the impact on the Colombian society. The positive and negative impacts can be analyzed through the lens of CSR. The former President of the World Business Council for Sustainable Development stated “business cannot succeed in a society that fails. Likewise, where and when business is stifled, societies fail to thrive” (Stigson, as cited in Liang & Renneboog, 2014). This is one the cornerstones of CSR: the idea that the destiny of business and society is a joint one and that they must be in unity for both to be successful. Kotler and Lee (2005) provide a broad definition of what CSR means, by claiming that “corporate social responsibility is a commitment to improve community well-being through discretionary business practices and contributions of corporate resources.”

This definition of what CSR means is very straightforward: corporations have a responsibility towards society, one that they are to fulfill by choosing how they do business. That is to say: only doing the activities that either benefit or do not damage society in any way or form, or actually giving resources they have acquired to society. In other words, either they maintain the status quo or help society, harming it is out of the question even if there is a monetary reward at play for the business.

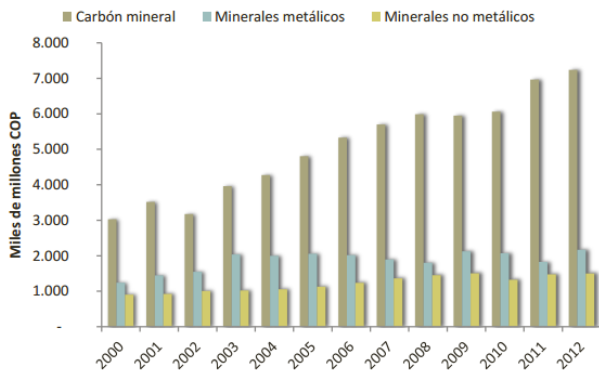
## IV. THE BENEFITS OF COAL MINING FOR COLOMBIA BY ORLANDO ANDRES PLATA BLANCO

The purpose of this section of the text is to show that major coal mining multinational corporations operating in Colombia are a net positive for the nation as a whole. This will be done by explaining: the benefits of royalties from coal mining, the application of CSR in the Colombian coal

mining industry and how penalties for lack of compliance help to recoup benefits and keep the industry in line.

Figure 2 represents mineral production in billions of pesos (millions of millions). Coal is represented in brown compared with the other mineral extractions represented by blue and yellow.

Figure 2. Colombia: Mineral production (Martínez, 2013, p. 6)



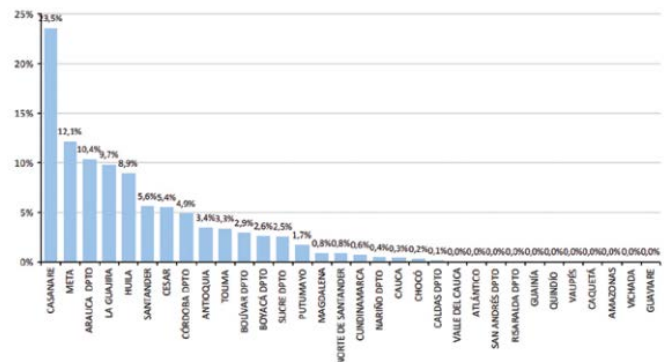
As can be seen it is a strategic national interest for the coal mining industry to remain here in Colombia. The amount of wealth that is generated for the state as a consequence of coal mining is currently one of the largest in Colombia. This is paid in the form of taxes and royalties. According to a Colombian government report Colombian coal generated 1,200,000 Million US dollars in royalties in the year 2011 alone (Monterroza, 2014, p. 4).

This money goes to several organizations, from the local departmental ones, to the Colombian Family Welfare Institute [Instituto Colombiano de Bienestar Familiar, ICBF] which uses the money to benefit the poorest members of society (ICBF, 2009). The money is redistributed not only in local areas where coal mining takes place but pays for programs all over the nation. Royalties are re-distributed from the wealthiest departments (or at least those that earn the most via the activities of businesses) to the poorest departments (Ley 1283/2009). Of course, some of the money may be lost through corruption or misuse. However, even if a portion of this money is lost, the benefits are still undeniable in size and scope. Not all money can be denied to social projects because a percentage of it is lost to corruption or misuse, not only would such a notion be misguided but it would spite those it is intended for.

Figure 3 shows that not all departments have access to money for social programs (in the form of royalties) and some are incredibly wealthy in comparison. These royalties

also come with taxes, since royalties are paid to the department in which an enterprise works, along with taxes.

Figure 3. Royalties /Department (Min. Minas, 2010, p.44).



Without a wealth redistribution program such as the one the royalties are submitted to, the top 5 departments would keep over 60% of all the royalties from the production of mineral resources. This would create extremely wealthy departments and create others that are egregiously poor. The concentration of wealth would definitely benefit some but this would not send the money to where it is most needed. A specific example would be the department of Chocó, which is one of the poorest and most corrupt departments in the nation (Alsema, 2015). This department only produces 0.2% of all the royalties (and by extension taxes from mining operations) in the entire country. “According to national statistics, 78.5% of the population of Chocó lives below the poverty line, with 48.7% considered to be living in extreme poverty” (Bradshaw-Smith, 2015). Without the ICBF programs, which in many cases are a result of the money taxed from large businesses and the regional programs which are a result of royalties the most needy could be left wanting.

Table 1 represents how much money is expected to be earned up until 2020. It is worth noting that coal’s contribution to royalties is expected to nearly double within the decade, which means that major coal mining multinational corporations are contributing far more to the country percent-wise than other mining or petrol production businesses.

The indirect benefits of this money are massive; some of the poorest departments will be able to maintain and start new social welfare programs which they would not be able to otherwise. Between 2010 and 2020, royalties are predicted to rise by roughly 50%. This 50% increase means 50% more social programs, or more money to maintain

existing ones. “Proven coal reserves of the country as of December 2012 were estimated at 6.746Bt” (Mining technology, 2013). The point of this statistic is to

emphasize the future benefits that coal mining could bring to Colombia in terms of monetary gain for many of the departments, in particular the truly poor ones.

**Table 1. Royalties projection of the mining and energy sector (thousand of millions of pesos) (Ministerio de Minas, 2010, p. 14).**

Resource	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hydrocarbons	5.870	7.290	7.550	8.010	8.100	8.570	8.510	8.750	9.010	9.260	9.540
Coal	1.331	1.339	1.379	1.496	1.512	1.501	1.567	1.649	1.695	1.801	2.047
Nickel	148	70	95	95	99	101	104	110	112	121	129
Others	138	138	143	157	177	188	191	208	224	237	272
Total	7.487	8.842	9.180	9.778	9.899	10.362	10.388	10.733	11.054	11.429	11.988

As was discussed, the cornerstone of the Colombian royalties system is wealth redistribution. A study by the Colombian government shows that if major coal mining multinationals ceased operations tomorrow, Colombia would lose out on roughly 6 million dollars a day from both taxation and royalties (Ministerio de Hacienda y Crédito Público, 2012). However, these are only indirect results of the coal mining industry’s activities: the companies also engage in CSR programs.

Coal mining multinationals use their CSR programs with two purposes in mind; to create good public relations for themselves and to generate goodwill with the adjacent communities so that their work is not impeded by angered locals. If what coal mining companies claim is true, the benefits they have at a local level in the department where they operate are clear: they are improving the lives of the people around them, rather than making them worse. Even if the reasons for them to do so are entirely selfish, the results are nonetheless the same. Table 2 provides an outline of stages of CSR implementation.

**Table 2. Evolution stages of CSR implementation (ICHHD as cited in Kessler & Gomez, 2013, p. 34)**

Stage	Activities
Third stage: New economic wide model	Multistakeholders alliances
	Public CRS policies
	Institutional development for CRS
	Active promotion of CRS
Second stage: Strategic CRS of companies	Competitive sustainability
	Effective dialogue and participatory mechanism and response to social stakeholders
	Value chains and transparency
	Development and implementation standards
First stage: Short term and scope	Philanthropy
	Short term risk management (reaction)
Conformity: Normative compliance	Legal compliance (environment, labor, health, safety, consumer rights).

A study by Kessler and Gomez (2013) found that all the major coal mining multinationals in Colombia fall into either stage one or two categories. Additionally, major coal mining multinational corporations are not obliged by law to create these programs. The enterprises realize an inescapable fact: improving the lives of those around them will improve their economic position in Colombia. It is a win-win relationship between the Colombian society and the enterprises.

Also, if the coal industry provides compensation when it damages the environment or the community: it can be said that the drawbacks balance out. The Colombian government have a fine/penalty system in place (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2010) and have been willing to use it when companies have not complied with regulations and have caused damage. Therefore, damages do not go uncorrected since the equivalent of the damage is paid in money and companies are penalized when they cause damage.

Coal mining benefits Colombia in many direct and indirect ways, and the damage it causes is made up for. The indirect benefits are mainly the result of taxation and royalty payments, and the direct are through CSR programs. These benefits would simply cease to exist were it not for major coal mining operations. This means that the enterprises are not only a financial good but also a moral good. Many of the benefits go to the least fortunate in Colombian society. Without the taxes and royalties many of the most vulnerable could literally die of disease and starvation. Much of the money is used to fund programs to feed the hungry and to offer medical aid to the ill. If corruption could be eliminated tomorrow, the benefits would be larger and far more reaching.

Directly, coal mining multinationals benefit people on a local level via CSR. They improve the lives of people in the

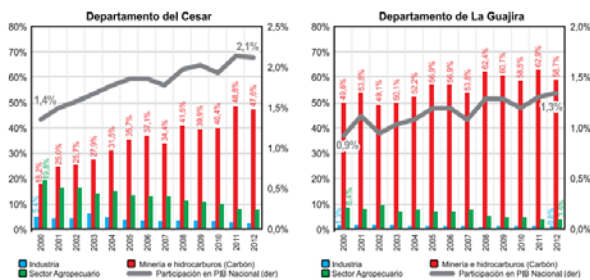
region by constructing schools and hospitals, among other projects. The reason why they do this is to improve their public image and earn the cooperation of the people of the region. Even though their motives are not altruistic, the benefits exist regardless of the motivations for those.

Additionally, whenever coal mining companies damage the environment, they are charged a determined sum of money for it. They are being forced via fines to be socially and environmentally responsible, and the money from those fines will be used by the nation for other purposes that will, in theory, result in the environmental recovery of the regions that have been damaged by the enterprises' operations. In conclusion, not only are coal mining multinationals benefitting the people around them, but the whole nation. They are not parasites but rather provide a net gain for society.

**V. THE PROBLEMS OF COAL MINING IN COLOMBIA**

This section aims to provide a balance to the previous arguments, with the point that: although major coal mining operations may bring benefits they also bring problems. These problems either cannot be remedied with money or CSR practices and/or are not in the interests of the businesses to solve at all. The following section focuses its attentions on the regions of La Guajira and Cesar which have the largest coal mining operations in Colombia. These projects based in the Atlantic region account for 92% of total annual coal production (Encolombia, 2013). Figure 4 highlights the amount of income generated by coal mining compared with other significant areas of economic activity (red, the biggest bar, represents coal).

Figure 4. (Rudas & Espitia, 2013, p.43)



Large coal mining operations have been associated with health problems, environmental degradation, community displacement and a general lack of improvement in life quality in the regions in Cesar and La Guajira.

Coal mining involves large scale transformation of the

territory in which coal mining takes place. Muñoz (2014, pp. 49-51) lists the following as significant changes that can take place as a result of coal mining: affectation of the surface, affectation of the surroundings, air pollution, affectation in the surface water, affectation of groundwater, affectation of the soil, impact on flora, impact on wildlife, impact on people, changes in microclimate and landscape impact post-exploitation.

All these factors create a difficult living environment for the inhabitants living near coal mining operations. A study of coal mine workers and animals in the vicinity of large coal mines in Cesar and La Guajira showed a significant change in DNA as result of exposure to coal (Olivero, Caballero, & Guerrero, 2013, p.235).

Furthermore the top (and only) Colombian PHD in environmental toxicology has found through studies that almost all communities living in the vicinity of large coal mining operations have been found to have within them cases of health issues associated with exposure to coal (Olivero as cited by Cuevas, 2014). Problems which were not present before such as: skin rashes, breathing problems, digestive issues, cancers and early death among others have been associated with the coal contamination of the natural environment (PBI, 2011).

One of the main problems of large scale coal mining is the serious and irreversible consequences on the environment. A large scale coal mining scale project generates in a year 70 times more waste than those produced by cities like Bogota or Buenos Aires in the same period (about two million tons) (Londoño, 2013). The excessive exploitation of natural resources is tied into this. Between 2000 and 2007 the country lost natural forests at an average rate of five hectares per year per thousand hectares of forest; in La Guajira and Cesar in both departments the figures were put at around 45 hectares per thousand hectares of forest to make way for coal mining (Gutiérrez, 2014). Another resource is that of water. It is estimated that around 178 liters of water is needed per ton of extracted coal (Rudas & Cabrera, 2015).

One case where the effects of coal mining on the water supply have been especially acute is that of the El Cercado dam. The El Cercado dam was inaugurated in 2010 along with a billboard stating: *From here will flow the water that will be the future to the Guajira*. This, however, has not been the case. Water has not been reaching those that need to river to survive. The...

(...) flow hardly makes it past the rice fields, cattle ranches and the world's largest open-pit coalmine that tap into the river below the dam. By the time it reaches the middle of Guajira, where the population is mostly Wayuu, the Ranchería is barely even a trickle (Brodzinsky, 2015).

90% of *Wayuu* (a local indigenous tribe) reservations have no direct access to water. The problem appears to be worsening with around 4,700 children dying in the last 3 years as result of drought (Emblin, 2015). Even though the problem continues the *Wayuu* have remained in the region despite facing a huge threat to their continued existence in La Guajira.

In the case of Cesar province the main issue has been direct forced displacement.

There were registered 4.948 murders in 14 municipalities in the mining area in the Department of Cesar between 1996 and 2006, also... that the number of people displaced as a result of the violence... in the Cesar mining region between 1998 and 2006 is approximately of 59,000 (Muñoz, 2014, pp. 30-31).

In the report *The Dark Side of Coal* it is revealed how multinational coal mining companies have directly benefited from the forced displacements and assassinations carried out by paramilitary organizations and have been accused of being in collaboration (Moor & Van de Sandt, 2014).

Another argument is how much of the royalties actually reach the people they are intended to help. In a study by Rudas and Espitia (2013) they state that in Cesar and La Guajira the poverty levels are around 90% of the population, making them two of the worst departments to live in. The report describes the high levels of mortality, lack of literacy, poor healthcare services and a general problem of access to the means required to acquire a decent standard of living for the majority of inhabitants of Cesar and La Guajira. This is because of a combination of the previously highlighted reasons, the insufficient application of corporate CSR programs by coal mining companies, the inefficient redistribution of royalties and corruption. In an interview a local community leader in La Guajira stated that the production and export of 2013, which was

(...) 33.5 million tons of coal, reflected in a gain of approximately 1.6 billion pesos and a growth trend of 43%, but had no benefit for the department of La Guajira. What it is doing is swelling the pockets of multinationals, the departmental economic elite, politicians and officials from the region (Lozano, 2014).

This could indicate that one of the main reasons major coal mining multinational corporations get away with bad practices is because powerful interest groups earn money directly or indirectly because of the enterprises' activities in Colombia.

The efficient redistribution of public funds and corruption are huge issues in Colombia. A 2012 report by transparency international puts Colombia as being the 94<sup>th</sup> most corrupt country, from 176 studied, up from 56<sup>th</sup> in 2002 (Gutierrez, 2013). The report also outlines widespread corruption in the state and government, including cases of bribing for mining rights involving government officials. One section is dedicated to the mineral extraction area where it states that government is not transparent about how mining royalties are distributed, how much is being paid and furthermore that the amount of money being reinvested in producing regions is being reduced from the current level of 80% down to 15%.

What can be garnered is that coal mining companies in Colombia do engage in CSR. Despite that they also partake in practices which go against the principles of CSR. As has been demonstrated: pollution, damage to the health of the local population and community displacement are all aspects of the coal mining dynamic in Colombia but definitely not part the CSR ethos.

Even though the coal mining industry in Colombia has received negative criticism for such practices this criticism has not had enough of a significant effect to change companies' practices.

The economies of scale that multinational coal mining companies have provide them with economic power and political influence. There may be setbacks for companies but coal mining multinationals continue their operation in Colombia and in fact are likely to enlarge these operations further (IBP, 2015).

Practices are unlikely to change soon without pressure from the Colombian government to make changes and to

take more care of the affected communities. Unfortunately for those communities they themselves have little power to influence the government or the companies.

It is true that coal mining multinationals provide benefits for Colombia. However, some areas benefit more than others and it is therefore uneven. The royalties are much needed and CSR programs need to continue but both must be more wide reaching in their impact. Furthermore, Colombia's economy needs coal mining for its growth and Colombians need coal mining for jobs. The task is to find a way for the interests of stakeholders to harmonize, to find more compromise on the part of the coal industry and to limit the amount of damage caused by large scale coal mining. Even if they are required to pay more in royalties or invest more in CSR the truth is coal mining multinationals are not leaving: the profits are too big. If they are pressed to pay more and change practices there is no doubt they will so they can continue to do business in Colombia.

The real change has to come from the Colombian state. The state which is itself responsible for granting contracts, enforcing regulations and distributing royalties has been an accomplice of big business in this case. Although there are positive stories associated with coal mining in Colombia there need to be more. Up till now the change has not been profound enough and that is likely to be the case until those most affected are able to influence a significant change in behavior of both coal mining multinationals and the Colombian state.

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## CURRICULUM VITAE

*Guy Henderson*. Master in Global Political Studies at the University of Malmo, Sweden. Bachelors in International Relations and Politics from the University of Plymouth in the UK. Participated as a speaker at the Sixth International Congress in Management, Entrepreneurship and Innovation, 2014. Professor and researcher at Universidad EAN, Faculty of Humanities and Social Sciences.

*Andrea González Lizarrago*. Master in Education with emphasis in Environmental Education and Bachelor of Social Sciences from the Universidad Pedagógica Nacional de Colombia. With an interest in the area of Social Sciences and Geography. Participated as a speaker at the 5th and 6th congresses in Management, Entrepreneurship and Innovation. Professor and researcher at Universidad EAN, Faculty of Humanities and Social Sciences.

*Orlando Plata Blanco*. Student of Business Administration at Universidad EAN.