

## **Social Responsibility Assessment of Mining Companies (Chemaf & Cdm) in the Haut – Katanga, City of Lubumbashi in Drc**

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**Abstract :** The south – eastern region of the DRC is located in the copper belt area, it concentrates an important mining deposit, with the publication of the new mining code more favorable to private investment, the Haut – Katanga knows to date a new mining boom in the field of copper, cobalt and other associated minerals. Indeed, the extractive companies located in the city of Lubumbashi neglect their social responsibility despite the recommendations provided in mining codes and regulations. The no – respect of these regulations by the mining industries does not promote the well – being of the local populations.

**Keywords :** social responsibility, mining companies, riparian, Katanga.

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### **I. Introduction**

The mining industry generates substantial economic benefits. In fact, minerals are used in the composition of many materials, products and services useful to individuals and to the development of communities. The minerals have industrial applications which give them an important economic interest. The motivation for mining is that most minerals are used to improve the quality of human life. (5) Steel and aluminum are materials that are used in the construction of airplanes, cars and buildings. Copper is a widely consumed metal in the automotive industries and more, particularly in the production of electric cables. Thus, the economic potential of these different minerals encourages developing countries to exploit their mineral reserves in order to enter this lucrative market. The Democratic Republic of Congo (DRC) is among the mining countries of Africa and the world. Located in the heart of the African continent, with an area of 2,345,41 km<sup>2</sup>, it is the second largest country in Africa after Algeria.

As a tropical country, the DRC has an equatorial climate with two main seasons that alternate during the year: the great rainy season and the great dry season between which are interspersed the small rainy and dry seasons. The mining sector is the main economic revenue source for the government, it promotes technology transfer, inflow of foreign currency, investment in infrastructure, job creation and opening up to other sectors (1,10,12). The economy of the DRC is mainly based on mining; the mining sector has been the backbone of the economy for ages. A major provider of foreign exchange, in 1986 it contributed nearly 13% to the GDP. Gécamine, which exploits copper, cobalt and zinc deposits, alone provided nearly 70% of export earnings in foreign currencies and contributed more or less 30% to state revenue. In 1995, the contribution of the mining sector was only 5.9%. (4), following the fall in the prices of raw materials, in particular cobalt and copper, which represent more than 80% of the DRC; the contribution slowed down to 2.4% in 2016. Since the adoption of a new mining code in 2018, more favorable to private investment, the Haut – Katanga has so far seen a new mining boom in the field of copper, cobalt and other associated minerals. The city of Lubumbashi has around ten mining industries that exploit and process minerals. Surely, mining sometimes leads to the relocation of populations. Community structures and the social fabric can be weakened and cultural identity can be disrupted. Mining can also cause health problems related to flying dust, generating a nuisance for the surrounding populations (6), certainly the determinants of health must improve for an increase in the well – being of workers and local populations. The mining sector of the DRC has the code and the regulations whose application of the recommendations provided for in the latter have not yet found the start of its execution. Musibono explains the confusion maintained by mining operators between their obligation to study the environmental, social impact and the social responsibility incumbent on them (7), in fact, the involvement of mining companies located in Annex and Kampemba township in the development of local communities remains little visible. Roussel and al 2009 points out the paradox between the intensification of mining activities and the socio – economic needs of neighboring communities which updates the debate on the contribution of natural resources to local development. (8) The complexity of the issue of the impact of the mining industry on the local population requires reflection within the framework of this study. The objective of this study is: to assess the social impact of the mining companies installed in the Kabetshia district, Municipality of Kampemba and pretty

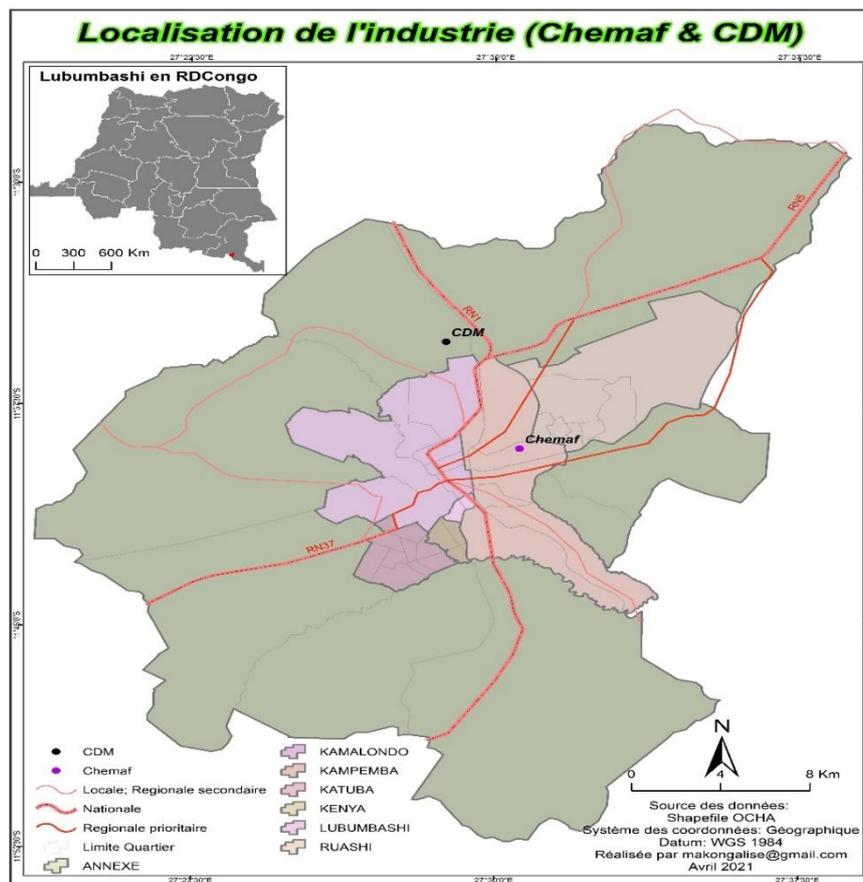
site district in the annexed municipality in Lubumbashi and in particular to identify the social achievements of the said company.

## II. Localisation, Material And Methods

### Type and site of the study

This is an observational cross – sectional study, which was carried out between November 6, 2019 and November 11, 2019, in the Province of Haut – Katanga, City of Lubumbashi in the Annex township and the township of Kampeмба. The city of Lubumbashi is a cosmopolitan city with an economy mainly based on the mining activities, located in the South-Eastern of the DRC; it is built on the plateau whose contour lines run from the North – West to the South – East. The geographic coordinates are between 11 ° 20' – 12 ° 00' South latitude and 27 ° 10' – 27 ° 30' East longitude. It is located at an altitude varying between 1,220 and 1,320 m. Its current total area is approximately 747 km<sup>2</sup>.

The city of Lubumbashi is a vast plateau, a platform overlooking the Lubumbashi river. The climate is tropical with two alternating seasons and a temperate and continental character linked to its altitude and remoteness from ocean masses; this is the CW6 climate of Köppen (Mbenza 1973), which means 6 months of the rainy season and 6 months of the dry season.



### Study materials

The riverine population and workers in the mining industries are part of our material. During the survey, we used a questionnaire. This was completed by the interviewer since our interviewee had a wide disparity in educational level. Table 1 below shows all the questionnaires administered to our respondents.

**Table 1: Questionnaires administered to respondents**

Categories of respondents	Questionnaires
Residents of mining companies	How long have you lived in this neighborhood ?
	How does mining industry work bother you ?
	Do you agree with the presence of the mining industry in your region ?
	Do you have drinking water at all times ?
	How do you get your water ?
	Is there a hospital or health center, a school built by the company in your area ?
	Were you contacted before the installation of the industry ?
	What was your opinion ?
	Has there ever been a conflict between you and the company ?
	Do you think the mining industry can continue its work in your region?
Mining company workers	What type of minerals does the company mine ?
	How long have you worked in this company ?
	Have signed a contract ?
	What type of contract?(Indefinit contract, Contract for specified duration or without contract)
	Does your salary allow you to tie the ends of the month;how much is it ?
	Has the company invested in another sector such as:
	Has there ever been a conflict between the company and the residents?
	Do you have complete and effective equipment for your protection during your work?

### Methods

We used a participatory approach in the form of a survey. We used a survey sheet. There was an interviewer who had to fill out the form for each respondent due to the disparity in level of education. The questionnaire was intended for two categories of people: residents of mining sites on one hand and workers in mining companies on the other. The questionnaire allowed us to collect information related to social works and achievements for the benefit of residents and workers of mining companies located in this area. The mining companies investigated were: CHEMAF and CDM, both specialized in copper and cobalt mining.

### Survey sampling

Our study focused on 160 residents of mining companies and 50 workers. The social responsibility of mining companies was assessed with a specific questionnaire.

### Statistics

Our data were entered in Microsoft Excel, processed on SPSS 20.1 software. We had calculated the frequencies between the two groups. These were compared with the chi – square test. The p – value <0.05 was considered to be the significant cutoff.

### Results

Table 2: Characteristics of local residents according to their social life

Questionnaires	CHEMAF		CDM		Set		P
	N=80	%	N=80	%	N=160	%	
Seniority in the neighborhood							0,040
<10 years	32	40,0	34	42,5	66	41,3	
11 – 20years	27	33,8	37	46,3	64	40,0	
21- 30 years	21	26,3	9	11,3	30	18,8	
Have clean drinking water at all times							0,001
Yes	19	23,8	39	48,8	58	36,3	

No	61	76,3	41	51,2	102	63,7	
How do you get your water							0,013
Well	58	72,5	41	51,2	99	61,9	
Drilling	22	27,5	37	46,3	59	36,9	
Tap	0	0,0	2	2,5	2	1,3	
Is there a hospital or health center built by the company							
No	80	100,0	80	100,0	160	100,0	
Is there a school built by the company							
No	80	100,0	80	100,0	160	100,0	
Have you been contacted before the installation of the industry							0,097
Yes	24	30,0	15	18,8	39	24,4	
No	56	70,0	65	81,3	121	75,6	
What was your opinion							
Favorable	24	100,0	15	100,0	39	100,0	
Has there ever been the conflict between you and the company							0,006
Yes	58	72,5	41	51,2	99	61,9	
No	22	27,5	39	48,8	61	38,1	
<b>Total</b>	<b>80</b>	<b>100,0</b>	<b>80</b>	<b>100,0</b>	<b>160</b>	<b>100,0</b>	

### Interpretation of the table 2:

The characteristics of the residents; it emerges from this table that the majority of residents of two mining companies had a seniority of less than 10 years. The table also shows that the majority of residents do not have drinking water at all times and that they use well water (72% SCHEMAF versus 51% CDM). One hundred percent of residents of two mining companies surveyed said the mining companies have not built a school or health center in their neighborhood. The majority of local residents were not consulted for the establishment of mining companies (70% SCHEMAF versus 81% CDM). Finally, 58% of CHEMAF residents versus 51% of CDM residents say they have a conflict with the respective mining companies.

**Table 3: Characteristics of local residents according to their concern with industrial works**

Questionnaires	CHEMAF		CDM		Set		p
	N=80	%	N=80	%	N=160	%	
Bothered by product from the industry							<0,001
Dust and smoke	21	26,3	39	48,8	60	37,5	
Bad smell	1	1,3	8	10,0	9	5,6	
Flood generated by effluents	15	18,8	0	0,0	15	9,4	
Dust, smoke, bad odor, and flooding generated by effluent	51	63,7	17	21,3	68	42,5	
Other	7	8,8	1	1,3	8	5,0	
Do you agree with the presence of the mining industry in your region?							<0,001
Yes	20	25,0	45	56,3	65	40,6	
No	60	75,0	35	43,8	95	59,4	
Do you think that the work of the mining industry destroys your environment?							0,050
Yes	64	80,0	53	66,3	117	73,1	
No	16	20,0	27	33,8	43	26,9	
Continuity of existence of industry in the region							<0,001

Yes	23	28,7	49	61,3	72	45,0	
No	57	71,3	31	38,8	88	55,0	
Has there ever been the conflict between you and the company							0,006
Yes	58	72,5	41	51,2	99	61,9	
No	22	27,5	39	48,8	61	38,1	
<b>Total</b>	<b>80</b>	<b>100,0</b>	<b>80</b>	<b>100,0</b>	<b>160</b>	<b>100,0</b>	

### Interpretation of the table 3:

Table - 3 presents the concerns of residents of the mining companies surveyed.

This table shows that nearly 63% of local residents are victims of dust, smoke, bad odors and floods generated by the effluents from the factories of these companies.

Nearly 60% of residents are against the presence of these companies, 73% of residents think that the work of these companies destroys their environment and are against the continuity of the activities of these companies in 55% of cases. Finally, 61% of residents say there is a conflict with these companies.

Table4: Characteristics of workers according to their working condition and social achievements.

Questionnaires	CDM		CHEMAF		Set		P
	N=25	%	N=25	%	N=50	%	
<b>Sex</b>							0,037
Female	0	0,0	3	12,0	3	6,0	
Male	25	100,0	22	88,0	47	94,0	
<b>Seniority at work</b>							
<1year	10	40,0	10	40,0	20	40,0	
1-5years	15	60,0	15	60,0	30	60,0	
<b>Sign a contract</b>							
Yes	13	52,0	13	52,0	26	52,0	
No	12	48,0	12	48,0	24	48,0	
Type of contract : Contract for specified duration	13	100,0	13	100,0	26	100,0	
<b>How much is your salary</b>							0,004
<500\$	12	48,0	4	16,0	16	32,0	
≥ 500	13	52,0	21	84,0	34	68,0	
<b>Care in case of illness</b>							0,544
Company hospital	18	72,0	16	64,0	34	68,0	
Private / others	7	28,0	9	36,0	14	28,0	
<b>Local residents empowerment project</b>							
Yes	4	16,0	5	20,0	9	18,0	
No	18	72,0	20	80,0	38	76,0	
No answer	3	12,0	0	0,0	3	6,0	
<b>Do you have complete equipment</b>							0,556
Yes	17	68,0	15	60,0	32	64,0	
No	8	32,0	10	40,0	18	36,0	
<b>What is its quality</b>							
Moderately effective	4	23,5	2	13,3	6	18,8	
Effective	13	76,5	13	86,7	26	81,3	
<b>Total</b>	<b>17</b>	<b>100,0</b>	<b>15</b>	<b>100,0</b>	<b>32</b>	<b>100,0</b>	
<b>Conflict between society and population</b>							0,023

Yes	10	40,0	18	72,0	28	56,0	
No	15	60,0	7	28,0	22	44,0	
<b>Total</b>	<b>25</b>	<b>100,0</b>	<b>25</b>	<b>100,0</b>	<b>50</b>	<b>100,0</b>	

**Interpretation of the table4:**

Overall, one in three workers reported earnings of less than \$ 500. A significant proportion of workers interviewed at Chemaf, declared a remuneration of more than 500 dollars or 84% compared to the workers of CDM.

The majority of workers from two companies reported that there is no local resident empowerment project: 72% versus 80%. More than half of workers reported conflicts between the company and the population and this percentage was higher in the group of Chemaf workers, is 56%.

**III. Discussion**

The current industrial exploitation is part of a new context of reindustrialization of the province on the basis of a new legal instrument: the mining code and regulations promulgated since 2003. Its promulgation was motivated by the decrease in productivity of the great Gécamines and aimed to install new hope for mining investors with considerable capital (9). However, the development of mining is causing an ever – increasing threat to life. (11), These are risks that simultaneously generate the degradation of ecosystems and landscapes and the increase in social injustices (Bader and Sauv , 2011).

This is why the mining regulations of the DRC in its annex XVII article first of the first chapter demonstrates the main objective of the specifications that the miner must present in accordance with the provisions of the Mining Code "to organize the implementation of the commitments of the holder of mining or quarry rights relating to the construction of infrastructures and service socio – economic basis for the benefit of local communities affected by the activities of his project.

It also aims to serve as an agreement framework to enable the realization of sustainable development actions aimed at improving the economic, social and cultural well-being of local communities affected by the mining project during and after mining.

"Our study aimed to assess the social impact of the mining industry installed in the Kabetshia district, KAMPEMBA township and pretty site district in the annex township in Lubumbashi. Our study showed that more than half of the residents of two mining companies surveyed (76% SCHEMAF versus 51% CDM) does not have drinking water at all times, so these residents use water from wells.

Indeed, the problem of drinking water among residents of mining companies is linked to the non-compliance with the social responsibility of companies contained in their specifications. Our results and concerns are also similar to those of Eric Voundi, Philippes Mbevo Fendoung and Patrick Essigie Emissi (2015).

Our study also showed that neither of the two mining companies has built a school and / or a health center that can participate in the development of neighboring populations. This observation confirms the non-application of the commitments recorded in the specifications signed before the establishment of their companies. Other countries like the DRC have experienced conflicts between residents and businesses. The latter is very often due to the fact that before the establishment of a mining company in an area the neighboring populations are not consulted to present their development project and also when the companies do not assess the real needs and priorities of the community; the opinions of the local population are not taken into account.

Our study confirms this, because 70%of SCHEMAF residents versus 81% CMD confirm that they were not consulted before the establishment of the two mining companies. The lack of consultation of the local population within the framework of the establishment of a mining company results in the conflict between the established company and the local residents.

This observation was made in our study where 72% of residents of SCHEMAF and 51% of residents of CDM declare that they have a conflict with these companies.Our results are similar to the report made by CORDAID, 2015. The conflict between mining company and local residents is proof of the absence of collaboration on the one hand, but also of the feeling of being victims of the destruction of one's environment without compensation.

**Conclusion**

The DRC, in order to benefit from its mineral resources, had moved to the policy of liberalizing the mining sector in order to attract investment in this sector. This legal framework has allowed progress in the

industrial mining sector which contributes to the Congolese economy, however, investors have not yet applied their commitment as included in their specifications.

Failure to respect not only the commitments made and the mining code and regulations does not promote the well-being of local populations and is the basis of conflict between residents and mining companies as demonstrated in our study.

### **Recommendations**

To the political administrative authorities of the Democratic Republic of Congo establish clear legal provisions for public consultation during the ESIA and ESMP of extractive projects and put in place a permanent formal consultation framework between operators and affected communities from the start of the project.

A rigorous monitoring of extractive company in the application of the mining code recommendations and regulations governing the sector.

It is up to extractive companies to respect their commitment prescribed in their specifications.

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