

# Mining Sector Governance and Companies Social Responsibility in Likasi DRC: A Praxeological Management Approach

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**Abstract:** *This study analyzes the link between the lack of development of local populations in the DRC and the legal texts governing mining in these localities. Indeed, the authors ask why the population's living conditions are so poor, when the texts governing mining operations always seem to put the well-being of local populations first. The authors chose the town of Likasi in the Democratic Republic of Congo's Haut-Katanga province as their field of investigation. The authors demonstrate a number of strategies for dealing with this situation, and provide an overview of the current situation.*

**Keywords:** mining code, mining, development, underdevelopment, social justice

## 1. Introduction

To carry out this research, we wanted to know to what extent mining sector governance could be a lever for positive corporate social responsibility. And to determine the impact of this governance on the socio-economic development of the populations living in the town of Likasi. From this perspective, the present study is relevant as an attempt to find a solution to the issue of governance in the mining sector, which will have the positive effect of reducing mass poverty in the DRC in general, and in mining Katanga in particular. It is of personal, social and scientific interest. Personal, because it falls within the field to which we wish to contribute solutions to the management of the entities concerned in order to boost socio-economic development in the town of Likasi. From a social interest point of view, insofar as this study responds to the question of societal contribution and improvements in the living conditions of the populations.

Our problem revolves around issues of governance in the mining sector. Our framework of analysis is governance in this sector, which has not led to changes in practices and improved living conditions for the population.

In the light of these considerations, we also asked ourselves the following questions:

- Why, despite the abundance of legal texts in the mining sector, are people's living conditions still precarious?
- How is the mining sector governed in the DRC?
- What needs to be done to get the Katanga region in general and the town of Likasi in particular out of this vicious circle of precarious lives linked to bad governance?

In light of the questions raised, we believe that the governance of the mining sector for the socio-economic

well-being of the population of LIKASI comes up against a lack of respect for ethical values, or rather the egocentric greed of those in power and their relay arms, who plunder and impoverish the population and the workers of the companies created.

Those in power are at the service of their masters, the rulers of the great imperialist powers. The wealth harvested in this way is channelled through relay industries and local operators, while the workers remain poor and almost commodified.

The perverse effects of this state of ethical non-compliance have not ceased to be felt by the population of LIKASI to this day. There is increasing decline and underdevelopment among the masses of all social categories.

As for trends in the non-observance of ethical values, it's worth noting that the hegemonic imperialism of the present era, as nurtured by multinational capital through our rulers, constitutes the highest degree of the exercise of rational violence by iron and fire to the detriment of conquered peoples. Consequently, mismanaged political and economic power savagely reduces an entire people to shreds.

In the current situation, paid and unpaid work, as experienced by the population of LIKASI and all the other oppressed people in the ex-KATANGA region, has become a form of servitude. This is a system of dehumanization in which our fellow citizens languish thanks to the egocentric greed of those in power.

## 2. Theoretical Framework

### 2.1 Key concepts

**Exploitation minière:** Exploitation is a term with many meanings. It means the action of exploiting something in order to make a profit from it. In this sense, we speak of

exploiting a factory, a business or a mine. Exploitation also means the act of profitably abusing (Mans's exploitation of one another). From this understanding, several forms of exploitation emerge: sexual, agricultural, commercial, mining and so on. Of all these meanings, this study focuses on the concept of mining.

### 2.1.1 Government

Government is the action of governing, i.e. directing, driving, leading, exerting a determining influence on the conduct of something or someone. It is the action of exercising political power over a social group (governing peoples, men). It also means directing the public affairs of a state.

Government therefore implies administration, leadership, direction, management (government of a house, of a family). It implies exercising a decisive or excessive influence on political life. It is the political and administrative authority of a city, a province, the authority, the public force that governs a state.

Applied to our study, government implies exerting a determined or excessive influence on the conduct and life of a company or institution in order to guide its operation and performance.

### 2.1.2 Governance

According to public policy specialists, the notion of governance has emerged in response to the diagnosis that governments are unable to respond to the problems they face, or to adjust to new forms of social, economic and political organization.

It is defined as "a process of coordinating actors, social groups and institutions, with a view to achieving objectives defined and discussed collectively".

In the light of these definitional elements, the relevance of governance is justified by the virtues that reveal the transformation of the role of the State and the modes of political regulation that were attached to it.

Originating in corporate management theories, the notion of governance has been used in a wide variety of contexts over the past three decades. Hence, we can legitimately speak of corporate governance (such is our case in the present study), local governance, urban governance, economic governance and even good governance, a neologism reserved exclusively for developing countries, as the normative principle underpinning cooperative relations between the BrettonWoods institutions and their debtors.

The Director of the World Trade Organization (WTO), PASCAL LAMY, quoted by Léonard She OKITUNDU, defines governance as "the set of transactions by which collective rules are elaborated, decided, legitimized, implemented and controlled".

Notwithstanding the fact that public policy theorists have yet to agree on a consensual definition, the explanatory postulate of governance is based on the principle of

consultation and negotiation between public, private and civil society stakeholders in a decision-making process.

So, at the end of this attempt to define governance as a new mode of public action involving several partners, with no hierarchical ranking of actor status, we can now define the concept of global governance.

### 2.1.3 Global governance

It does not imply the institutionalization of a world government like that of the States. Rather, it implies the construction of public and private regulations on a global scale. In international relations theory, too, global governance poses a major challenge, as we seek to go beyond traditional frameworks of thought to make governance a specific tool for new issues. In this sense, global governance suggests governing without government, building legitimacy without representative democracy, resolving conflict without hegemony.

This is a challenge for internationalists interested in cosmopolitan democracy, which includes a growing level of institutionalization and innumerable regulatory mechanisms, yet lacks a supranational body".

This author thus joins others in asserting that the idea of sovereignty belongs to a doctrinal tradition that is in the process of being exhausted, and that sovereignties are therefore doomed to be shared. It follows that states are not the only supporters and promoters of international order and transnational cooperation regimes beyond the direct control of governments: the role of states is certainly not obsolete, but other organizational structures are imposing themselves alongside them, with new social actors taking over functions that public administrations are proving incapable of carrying out properly.

For researcher ZAKILAÏDI and Pascal LAMY, global governance should be understood as "the processes by which political, economic and civil societies negotiate the modalities and forms of planetary social arrangements on the basis of the principle of conflictual cooperation".

Seen in this light, global governance is articulated through a multitude of international institutions, as well as numerous formal and informal agreements between states, regional organizations and international civil society. Despite the multiplicity of interpretations and the variability of the content of global governance, a certain number of principles underpin its mode of operation and organization, notably: equity between nations, legitimacy of multilateral institutions, equality between missions, transparency and democratization of these same institutions.

In terms of the underlying context for the emergence of global governance, it should be remembered that until the early 1990s, the issue of global governance did not arise. Indeed, the term interdependence was used to define the management of relations between states. However, the fall of the Berlin Wall and, subsequently, the end of the Cold War, unquestionably marked a geostrategic break.

Engaged in increasingly anarchic, even conflictual multilateralism, humanity is on the verge of breaking the fragile balances on which its cohesion and unity depend. At the same time, the feeling of belonging to a common humanity has not yet given rise to a truly self-aware global community capable of creating the institutions it needs to survive.

The first milestones in global governance were laid in the aftermath of the Second World War, with the United Nations system, the Bretton Woods system, the system of heterogeneous governance and the system of informal groupings of states. However, the major political, economic, financial and environmental upheavals of the last three decades have also given rise to new challenges, highlighting the inadequacy of the regulatory system of multilateral institutions inherited from the Cold War.

Two major phenomena characterize current globalization. Firstly, the growing political role and economic clout of new global players such as China, India and Brazil are leading to a new distribution of power on a global scale.

Secondly, the growing awareness of States and public opinion of global problems such as environmental degradation, migratory flows, financial speculation, terrorism, poverty and underdevelopment. All these new challenges call for a new common approach, in other words, new modes of international regulation embodied by global governance.

Another new challenge is the management of global public goods. Indeed, given the ineffectiveness of the 1997 Kyoto agreement, competition for access to natural resources is giving rise to potentially conflictual tensions.

Thus, rethinking global governance from the perspective of restructuring the multilateral institutional architecture inherited from the Cold War is becoming both a political and axiological imperative.

Finally, the imperative of global governance finds its relevance in the advent of new global challenges that go beyond the framework of the current international institutional architecture. The current system of international regulation must undergo far-reaching reforms to ensure that the world's numerous interactions are maintained.

Faced with the challenges of global governance as practiced by international institutions, the crisis of legitimacy and the absence of EQUITY are at the heart of the most elaborate criticisms.

Indeed, the current international regulatory system, unbalanced in favor of the most powerful players, does not give global governance any real legitimacy. Moreover, EQUITY is one of the major conditions of global governance.

#### 2.1.4 Equity in governance

It is defined as the ability of the weak to make their voices heard and their points of view heard by the powerful.

Unfortunately, the lack of equity is only manifested through a number of processes, notably in the drawing up of agendas, in the distribution of decision-making powers and in the implementation of UN resolutions, rather than being a direct expression of the voices and cries of the weak.

#### 2.1.5 The development

Integral, comprehensive, mutually supportive and sustainable human development encompasses not only economic and financial aspects, but all dimensions of the human person and all social strata, with particular emphasis on the plight of the poor and socially excluded.

Development is defined as sustainable insofar as it satisfies the needs of the present without compromising the ability of future generations to meet those needs. It thus targets three important interrelated areas: political-economic, social and environmental, which together lead to a more prosperous and just society, guaranteeing long-term benefits.

Integral human development therefore implies the transition, for each and every one of us, from less human to more human conditions.

POPE Paul VI distinguishes three successive stages in such a passage:

- The first is the emergence from less human situations, situations formed by the material shortcomings of those mutilated by selfishness;
- Liberation from oppressive structures, whether they arise from the abuse of possession or the abuse of power, from the exploitation of workers or the injustice of transactions;
- The way out of poverty and victory over social ills.

In the second passage, integral human development implies greater consideration for the dignity of others, cooperation for the common good, the will to establish peace among communities and distributive justice of wealth.

The concept of development is defined differently by different sciences and authors. However, it is considered to be a positive change that takes place in the life of a being.

In the social sciences, there is an arsenal of definitions of this word, which is of capital importance in the life of the individual and of society.

François Perroux defines development as a combination of "the mental and social changes in a population that enable its overall real product to grow cumulatively and sustainably.

Indeed, man's action - through work - is to improve his daily life by increasing production. An increase in production in principle calls for a revision of the wages allocated to workers by capitalist principle.

As a result, Perroux confuses economic growth with development, since it's possible to increase overall real output while at the same time experiencing negative wage growth.

There are also cases where the cumulative and sustainable growth of the company's overall real product also increases with that of the cascading devaluations.

However, a positive aspect of this definition is that of mindset development. The author invites us to get rid of old mentalities in favor of new ones. Are new mentalities development?

The adjective used by the author, "which makes her capable", is important because positive mentalities are needed to bring about positive change for the benefit of the greatest number of people.

This definition shows that development is : Action aimed at transforming the mental structures of production and consumption;

The DRC is one of Africa's richest countries in terms of natural resources, notably water, forests and/or minerals. However, the country is caught up in a spiral of impoverishment that is not helped by the way its mineral resources are managed.

Since 2002, the mining sector has been presented as a growth lever by international financial institutions, and has been placed at the heart of our country's national strategy in the fight against poverty. From colonial times to the present day, Likasi in particular and Katanga in general have been considered the richest mining regions. The exploitation of their mining potential contributes in no small measure to the economic growth of this region and of the DRC as a whole. Our contract is that the mining sector in Katanga has a proliferation of 225 mining companies.

The figure today is even 266 mining companies, of which Likasi is home to more than 51. But alas! This proliferation of mining companies has not led to any improvement in the living conditions of the population.

We have also observed that, as part of their development programs, international financial institutions have pushed for reform of the Congolese mining sector, presenting it as an alternative to ensure governance, strengthen the efficiency of the State and attract private investment.

In order to harmonize its policy with these reforms, the DRC has set up a whole legal and technical arsenal:

- Mining law of 03/05/1967
- Dec 16, 1910 decree
- The decree of August 16, 1919
- Decree of 27 Sept 1937
- The law of May 3, 1967
- The law of 02/04/0981
- The Mining Act of July 11, 2002 ;

The new revised mining code of June 13, 2017

This arsenal offered political, legal, tax and customs facilities, which resulted in an increase in mining companies. But alas! All this has not led to an improvement in people's lives. After legal and institutional renovation, the mining

sector's participation in the development dynamic is proving disappointing.

This situation therefore implies that there is a problem with the management or governance of the mining sector, and it reinforces the precariousness of people's livelihoods, with a mass of idle workers who are a major factor in both social and political destabilization.

Considering the proliferation of businesses in Katanga, one would assume that this reality would generate jobs and some improvement in the living conditions of the population through the effect of corporate social responsibility.

Corporate social responsibility, therefore, being the goal pursued in the creation and establishment of companies beyond their own profit, implies that to achieve it, the company will have to face up to the law of contingency, i.e. strive to adapt to the environment, adapt internal variables to external ones, operate its integration into the environment while differentiating itself in the face of the influence of external variables produced by the environment (the environment and/or political governance, culture, etc.), provided that the human community finds its interest in the advent or presence of a fledgling company.), provided that the human community regains its interest in the advent or presence of a fledgling company.

#### a) Classical or liberal vision of underdevelopment

It sees underdevelopment as the backwardness of Third World countries compared with so-called "developed" countries. The most prominent theorists of this vision (Rostow, Adam Smith, Ricardo, JB Say, Keynes, Malthus...) analyzed underdevelopment on the basis of a series of socio-economic indices, and developed qualitative and quantitative criteria to help define it: retrograde totality, predominance of agricultural activities, geographic explosion, mass consumption, per capita income, hunger.

A country is said to be underdeveloped when : Low per capita income of less than or equal to USD 500 per year; Chronic undernourishment in :

- a) Calories: Less than 20 grams instead of 200 grams/day
- b) Protein: less than 9 grams instead of 45 grams / day
- c) Fat: less than 30 grams instead of 100 grams/day

Sanitary, hygienic and housing conditions in a pitiful, defective state;

Life expectancy: 30 to 40 years, compared with 60 to 70 years in developed countries;

Low level of schooling ( $\pm 35\%$ );

High fertility ;

A high birth rate and a high death rate;

Strong population growth ;

A magico-religious mental structure;

The predominance of irrational collective interests ;

Rigid social structures;

Absence of a middle class and subordinate status for women; Unbalanced, dualistic production structures; Low efficiency in organization and management; High inequality in income distribution; High dependence on foreign aid; High foreign debt; Unstable, often dictatorial political



structures; A bloated, inefficient and corrupt public administration, etc.

#### b) The radical or Marxist vision of underdevelopment

There are many researchers in this category. Among them are Ziegler, Albertini, Chaliand, KazadiKimbu, Longandjo, KalungaMawazo and others.

Underdevelopment is analyzed here in terms of the situation of massive domination-exploitation-proletarianization into which some countries have been plunged by others.

Chaliand sees underdevelopment as a structural block to growth in poor countries, due to the effects of domination by industrialized countries, causing an internal distortion in the economies of the dominated.

On this subject, the author writes, it is the domination of the industrial capitalist countries, and the inability - and refusal - of the ruling classes in poor countries to free themselves (...) that explain the stagnation of underdeveloped countries.

Technical improvements and partial reforms can alleviate the most serious contradictions, but cannot overcome the global life of societies in underdeveloped countries and their unbalanced economies.

Ziegler believes that imperialist capitalist domination of poor nations is the cause of underdevelopment, and not infant mortality and so many other elements considered by the first school (liberal and classical) as causes of underdevelopment. He puts it this way: the imperialist system unifies the world. But it unifies it negatively.

The accelerated accumulation enjoyed by the peoples at the center, or at least by some of their classes, is paid for by the martyrdom of the destruction of the people on the periphery. The imperialist capitalist system sees the mutilation, the infanticide, of the worst as a necessity, or better as a "burr".

For his part, J.M. Albertini believes that the economies of Third World countries are both disjointed and dominated. This is the profound nature and cause of underdevelopment. The struggle for development will then involve the restriction of economies, the fight against both sociological and economic disarticulation, the transformation of dominations into simple interdependencies<sup>26</sup>.

Insisting on the role of competition between capitalists in their struggle not only to remain in the affluent class, but also to control the world in all spheres of existence, capitalists impose increased poverty on the dominated bloc. This is what Longandjo maintains at : "underdevelopment is a process of marginalization and massification of national and social productive forces as a result of unequal capitalist intersectoral development and competition in production within the dominant hegemonic bloc".

From a radical point of view, we see underdevelopment as a state of domination, exploitation and the massive production of misery in Third World countries by the will of big capital, with the aim of maintaining and perpetuating a high standard

of living through its stranglehold on the political, economic, cultural and military sectors of the nations of the South.

To this end, we define development as the freedom to produce and consume tangible and intangible goods for a society that enable a real, sustainable and cumulative increase in product to achieve its well-being.

#### 2.1.6 Mining sector

The mining sector is a field in which mines are exploited. This brings us back to the subject of mining. Mining Exploitation is a polysemic term, it has many meanings according to circumstances. It means, the action conducted so as to give an economic value to a mineral site. Exploitation also means to abuse one's authority over another human for the sake of financial or personal gains. In that case, exploitation can be financial, sexual, forced or unpaid labor, etc. in the current study, we put a stronger emphasis on the action of giving financial value to a mining site.

According to the Congolese Mining Code, mining is any activity by which a person engages, from an identified deposit, and by means of surface and/or underground works, in the extraction of mineral substances from a deposit or an artificial deposit, and possibly in their processing in order to use or market them.

Mining is therefore the set of operations that enable the mining, removal and extraction of ore, as well as the provision of all ancillary services for a mine in its normal production phase.

Mining consists of extracting minerals of economic value, for the benefit of shareholders, stakeholders and society in general. A mine or quarry is operational when rock and soil are removed from the ground to produce a saleable product at the processing plant.

There are three types of mining: large-scale, small-scale and artisanal.

#### 2.2 Contingency Theories in Mining Governance

"Contingere", from the Latin meaning "to happen by chance". Contingency implies unforeseeable events or fortuitous circumstances.

Contingency theories see the life of organizations as a set of variables that form more or less coherent wholes between them. Internal variables are supposed to adapt to external variables such as the market, and together these variables form a coherent whole or configuration.

The reference authors in this theory are: Burns & Stalker, Lawrence and Lorseh, Mintzberg.

These variables introduce an essential new theory to explain organizations: contingency or contingency theory. It implies that each organization will have to provide specific responses to equally specific problems.

So, there are no optimal solutions. We need to identify the factors that explain contingency, so that organizations can adapt to them.

### 2.2.1 Contingency according to BURNS & STALKER

In 1964, these two English researchers published a book entitled "The management of Innovation".

They studied the structure of industrial companies. They looked at the environment of these organizations to select the essential elements. Their finding is that it is the nature of the environment in general that explains the form chosen by organizations. If technology or the market are stable, no longer evolving, so are organizational structures.

On the other hand, if the environment is marked by uncertainty and complexity, organizations will try to find the structure that seems best suited to them.

For them, the variability of the environment makes it possible to distinguish two main structures for organizations:

- Mechanistic structures adapted to a stable environment;
- Organic structures adapted to an unstable environment.

However, these structures are flexible and adaptive. Both authors emphasize that, whatever the structure adopted, there is no such thing as a better structure than another. A structure or organization must adapt to the current environment or context.

An organization must change if its environment changes. But the solution must be contingent, i.e. the change must be effectively controlled as a result of what the environment imposes.

### Contingency according to LAWRENCE & LORSH.

In 1967, Harvard Management Professors Paul Lawrence and Jay Lorsh published a book entitled "Adapting Company Structures".

They seek to identify the environmental factors that explain the structure chosen by a company. They analyze three factors: changing environmental conditions, the certainty of information acquired, and the length of time needed to know the outcome of decisions.

Unlike Burns & Stalker, these authors want to emphasize that adapting structures to the environment is a condition for the survival and effectiveness of organizations.

For them, the uncertainty of the environment makes it possible to distinguish two behaviors for organizations: differentiation and integration.

- As far as differentiation is concerned, the organization will develop specific characteristics according to the constraints of the environment, both technical and human.
- As for integration, the organization will unify the company's functions to achieve the set objectives.

LAWRENCE PAUL & LORSH, JAY emphasize the choice of a formal organization, without making it a dogma.

In terms of contingency, some mining companies cannot survive in a given type of environment.

Mintzberg, for his part, establishes the link between structure and organization. He highlights contingency factors such as age, size of organization, technical system, environment, etc.

The contingency of mining operations therefore implies that they take into account their social and societal responsibility (). According to Koffi Annan, in his "Global Compact", companies must take into account issues linked to human rights and environmental protection if they are to be able to raise funds on the international stock exchange.

Mining operations should take into account the Rights of communities living in the vicinity of mining sites in their adaptation to internal and external influences.

However, the environment, as supported by contingency theories, is not always the key variable; it's the organization's purpose and adaptation to the environment that are variable-geometry concepts.

## 2.3 General Considerations on Governance

Five distinct sections make up the body of the second chapter. These sections deal respectively with: the history, the definition, the dimensions, the characteristics and finally the major areas of governance.

### 2.3.1 Governance history

The various contours of the notion of governance can only be fully grasped when we are informed of the itinerary taken by this concept which, in the eyes of certain researchers or practitioners in many fields, seems like a neologism, yet is a very old notion despite its current slowdown.

Guy Hermet and Ali Kazancigil point out that governance has been used for centuries in various languages, including French. In Spain, for example, King Charles Albert of Piedmont Sardinia was already advocating *buongoverno* around 1840 as the primary means of pulling his fairly decrepit kingdom out of the doldrums. These authors find no remarkable differences between *buongoverno* and good governance, as defended by those who do not assign it a precise meaning. Let's agree with these authors that it was the major international development aid agencies, and the World Bank in particular, that first awakened people's curiosity about *al gouvernement* in 1989, when they began prescribing "good governance" to leaders deemed clumsy and corrupt in the impoverished countries of sub-Saharan Africa. Finally, they note that the word dates back to the 13th century in French, English, Spanish and Portuguese.

Joseph CihundaHongoela also asserts that the origins of the concept of governance go back a long way. He refers to the Middle Ages, with its English equivalent "governance", to characterize the organization of feudal power. Cihunda adds that from the 14th century onwards, with the emergence of the modern state, conceptual thinking on power increasingly distinguished between the notions of governance and government. This difference meant that governance took a

back seat to Machiavelli's concept of a state monopolizing the integrity of a power exercised over a population circumscribed to a given territory. As a result, governance was marginalized and used only to describe the science of government, i.e. the way in which public affairs are properly managed, independently of the question of power.

At this contemporary time, Cihunda speaks of "good governance", which entered the political and scientific discourse of the late 1970s after the failure of structural adjustment policies and "development dictatorships", formerly supported by the World Bank and the International Monetary Fund. Many authors rightly or wrongly situate good governance in the early 1990s, and unanimously link it to the failure of these programs.

On the international level, Cihunda points out that the term governance conquered the political scene during the first Gulf War in the 1990s, referring to the words of former US President George Bush senior, according to whom, governance was part of a certain expectation of a "new world order" that should raise a number of questions, including:

The organization of power on a global scale, its means and ends, as well as its legitimacy and political responsibility.

J.R.WolaMbalaimbopo notes that governance is an older notion than the science of governance, i.e. politics itself. He acknowledges that governance exists in all societies, whether traditional or modern. J.R.WolaMbalaimbopo situates the debate on governance on two levels: global and African.

On a global level, the International Conference on Governance was organized by the United Nations Development Programme (UNDP) in 1997. More than 11,000 participants from 160 countries, bilateral donors and United Nations agencies attended.

In terms of definition, good governance has become the watchword of African heads of state and government who, since the conference of African and French heads of state in Ouagadougou, Burkina-Faso, have explicitly recognized that poor governance is the brake on their countries' development. Another milestone worth mentioning is the first regional meeting held in July 1997 in Ethiopia on the general theme of "governance". Its second session, held in June 1998 in Ghana, focused on "accountability and transparency, essential elements of good governance". Finally, the New Partnership for Africa's Development has also made good political and economic governance a priority in its development policy.

### 3. Methodological Framework

When Likasi was founded, the town had a clear forest, which was denser along the watercourses. Today, however, there are only a few fruit and ornamental trees. This is a clear sign of desertification, which is spreading as far as the Kambove Territory, where the town of Likasi, which no longer has any forest, draws its supplies. In order to prevent this catastrophe, reforestation with fast-growing trees should

have been carried out, in addition to improving the electricity supply. Unfortunately, as we pointed out above, the reforestation campaign is not even on the urban authority's agenda. Indeed, as KayumbaKagela Paul points out, "for a deforestation equivalent to 19,000 tonnes in 1985, 1,800 ha should have been reforested in 1975 for a rotation of 8 to 10 years. We can therefore admit that the city of Likasi is lagging behind the thirty years of deforestation, because its consumption was not planned, otherwise the city would already have reforested 4,000 ha since 2000". In our humble opinion, Likasi's political and administrative authorities will have to face up to this reality for the sake of future generations.

### 3.1 Mining companies studied

#### 3.1.1 Shituru Mining Company (SMCO)

Located around 4 km from the village of Kanyanina, the SMCO factory is upstream from the Panda river, from which both farmers and the factory draw their water. "The unprotected acid basins have already burnt the surrounding vegetation and are creating fear among the population, given the position of the basin, which could give way one day. In fact, the company discharges its acid effluent, which overflows and flows into the river that supplies drinking water to between 2,000 and 2,500 households" (2). The population of Shituru and Buluo also complain about the gases emitted by the company, especially at night, causing suffocation and lung disease.

#### 3.1.2 CJCMC Company

Located in the commune of Shituru, the company has no environmental department and no ESIA, which means that acid effluents are superficially recycled and then discharged into the environment. This is a suicidal act on the part of the company towards the surrounding population.

#### 3.1.3 Feza Mining company

Still located in the commune of Shituru, this pyrometallurgical plant, which produces cobalt ores and white alloys, produces gaseous emissions that are released into the atmosphere during operation of the plant, whose furnaces are heated by hulls and charcoal.

#### 3.1.4 Baraka Mining

Located in the commune of Likasi, in the Kamatanda district to be precise, the low chimney height means that every time the furnace is heated, the fumes are directed towards neighbouring homes. These fumes cause lung disease.

#### 3.1.5 EntrepriseMétal Mining

Located in the commune of Shituru on the Lubumbashi road, acid effluents from this hydrometallurgical plant, which produces cobalt concentrates and copper cathodes, are discharged into the Buluo river, contaminating soil, surface and groundwater. This contamination then reaches the Panda and Lufira rivers, before finally reaching Lake Tshangalele.

#### 3.1.6 Bazano Group company

Located in the Likasi commune, more precisely in the industrial district, this company, despite having its own environmental management department, continues to pollute the environment. Every morning and evening, smoke is

released, and the surrounding residents are the first victims. With a dump on the Kamatanda road where the slag is dumped, the slag flows into a stream, the Kamatanda River, threatening to dry up. What's more, this slag covers fertile land that used to be farmed by the inhabitants of the Kamatanda district and surrounding area. It should be pointed out, however, that this company has been shut down since 2012 after damaging arable land.

### 3.1.7 Hwuachin Company

Located in the commune of Panda on the Kakontwe road, since this company began sourcing from the Shamitumba quarry, waste is buried in the ground to avoid contaminating the fields of nearby market gardeners. This pit is fitted with a watertight mat to prevent acid effluent from seeping out. Native workers are not protected in the same way as Chinese nationals, especially those assigned to the acid plant.

### 3.1.8 Company JMT SPRL

Located in the commune of Panda on the Kakontwe road, this company has been repeatedly criticized by its neighbors and the authorities for making no effort to improve its environmental management. Built astride a river, the Kamilopa, rainfall washes waste into the surrounding environment. When crushing the raw material, workers are not protected against dust because they do not have adequate equipment. Furnace workers are also exposed to slag splinters and sparks.

### 3.1.9 Belfast Company

Located in the commune of Panda on the Kakontwe road, the company has a pyrometallurgical plant for copper production and a hydro-metallurgical plant for processing cobalt ores and copper cathodes. Acidic effluent discharged into the river that runs alongside the Cercle de Loisirs de Panda, or CLP for short, poisons market garden crops. In addition, the acid-laden effluent, which forms whitish fungus, demonstrates a veritable "scorched earth" policy beyond the concession, and is often the cause of conflict with neighboring companies (Rubamines in particular). Waste management is in no way covered by an ESIA, which in fact does not exist.

### 3.1.10 Entreprise Rubamines SPRL

Situated in the commune of Panda on the Kakontwe road, some 10 km from the town center, the plant is located in a housing estate inhabited by local people who complain incessantly about the air pollution caused by the toxic fumes. When cobalt is extracted, the concentrate is mixed with charcoal, which is molded before being put into the furnace. Lung and eye diseases are very common among unprotected workers, especially day laborers, who are only covered in exceptional cases of accident. The plant also produces slag, which used to be stored on the factory premises, but is now dumped beyond the fence, where the owners of the fields have been evicted without any prior fair compensation.

## 3.2 Mining deposits

Some twenty-two mining depots operate in the city's residential areas, polluting the air, soil and groundwater. In these depots, ores are crushed, sometimes washed, sorted, sifted, bagged and stored on the ground without protection

from the elements. These operations generate dust that pollutes the air, a complaint voiced by local residents who don't know which way to turn. This uncontrolled storage also leads to soil pollution through ore leaching and heavy metal contamination of the groundwater, as the aquifer lies at a depth of between 30 and 70 metres below the town in many places (1).

All in all, Likasi's mining companies, namely the Shituru, Concorde Mining, Métal Mines, SMCO, CJCMC and MJM metallurgical plants, produce copper and cobalt. The ore washing water and effluent from these plants contain heavy metals, which are often discharged without prior treatment into the Buluo and Panda rivers, which in turn flow into the Lufira river and finally into Lake Tshangalele at Kapolwe, with harmful ecological consequences. Research carried out in 2009 by a team of researchers on the analysis of trace metal elements, cobalt, copper, zinc, arsenic, cadmium, lead, uranium and vanadium in water samples reveals "heavy metal contamination of rivers and Lake Tshangalele. In fact, these results indicate a high concentration of trace elements in the tributaries of the Likasi factories, which are heavily polluting the Panda River, where lead values are multiplied by six, zinc by nine and cadmium by twenty-two, but the highest concentrations are found in copper and cobalt, where values downstream of Shituru are eighty-four and sixty-six times respectively those upstream. In Lake Tshangalele, the results show that, with the exception of sites located far from the mouth of the Lufira River, all other sites have high levels of trace elements, the highest being copper, cobalt and zinc" (1).

In fact, the Panda, Likasi, Buluo, Lufira, Kamatanda, Katuzembe, Kaponona, Kansama and Kamilopa rivers are contaminated by mining waste, not forgetting Lake Tshangalele at Kapolowe, where fish and other amphibians contain traces of heavy metals above the tolerable average, as this team of researchers points out, who confirm that "the results of all the fish species analyzed are above the standards recommended by the Conseil Supérieur d'Hygiène Publique de France (1996) on the edibility of fish, which sets the thresholds for zinc at less than 100 mg/Kg and copper at 0.10 mg/Kg" (2). This contamination is of concern not only because it limits or eliminates the use of water for domestic purposes, but also because of the damage it causes to aquatic organisms. Consumption of these fish therefore poses a risk to human health.

In order to confirm our thesis, we have resorted to the systematic method, one of the analytical methods used in the social and human sciences, which enables us to consider governance as a totality containing elements that constitute a structured and coherent whole with a view to a logical explanation.

We will show how we proceeded in our surveys, in the determination of our sample and in the way of administration of our results in tabular form. For certain data we resorted to analytical - deductive documentation. Finally, we will interpret the results and propose managerial solutions for responsible governance of the mining sector.



### 3.3 Survey: Definition and Purpose

#### 3.3.1 Definition.

A survey is defined as a field study enabling the researcher to collect data and compare them with theoretical data in order to draw conclusions. The survey thus provides the researcher with a thesis based on data - information.

#### 3.3.2 Purpose of the survey

The aim of our study is to verify our thesis that poor mining governance has an impact on improving the conditions of the population.

MULUMBATI NGASHA believes that when the survey universe is too vast, a sample is chosen, i.e. a small number of individuals, group companies or social categories belonging to the survey universe.

We consider the sample to be a reduced number of members of the survey universe with the same characteristics as the largest number of members of this universe. Our survey universe is the mining companies based in the town of Likasi.

To select this sample, scientific chance has standards to meet.

### 3.4 Sampling process

Due to financial and time constraints, we were unable to survey all active and non-active companies, i.e. 266 under mining law 007/2002, including Katanga and 51 in Likasi. We therefore took 1/10 of the number of companies in Likasi, including 5x2 companies, because they are active, contain a large number of workers and have an impact on the population of Likasi. We selected 10 companies and also interviewed some mining administration executives.

These companies are :

- 1) SmcoShituru Mining Compagny
- 2) Cjcmc Company
- 3) Feza Mining
- 4) Baraka Mining Company
- 5) Metal Mining Company
- 6) Company Hwachin
- 7) Jmt Sprl
- 8) Belfast Compagny
- 9) Entreprise Rubamin Sprl
- 10) Kypeng Mining

Ten out of 51 companies, i.e. a sample of 0.19%, our sampling is probabilistic with reasoned choice. Using the snowball technique, we also interviewed civil society players, the people living near mining companies. Finally, we made extensive use of documentary techniques to analyze this thesis. In each company, we interviewed an average of 24 people, plus 4 people for large companies, making a total of 244 interviewees.

### 3.5 Questionnaire administration

Written in French, our questionnaire includes open, closed and range questions. It was administered to the target audience.

### 3.6 The epistemological problem of research.

The following problems have been observed:

- As the French language is not comprehensible to all, the use of SWAHILI, TSHILUBA, Lingala was necessary.
- Ad hoc questionnaire with well-defined categories: The general questionnaire didn't reach everyone, so we resorted to a supplementary questionnaire.
- Refusal to welcome us: some company managers didn't welcome us easily and thought we were demonstrating their misdeeds for all to see.

## 4. Results

We drew up a questionnaire of 20 questions addressed to the 24 agents in each company plus 4, giving an average of 244 agents out of 2,500, i.e. an average of 0.9 rounded to 10%.

### 4.1 For Mining Companies

1ère Question: Did you draw up a mitigation plan (MAP) and a rehabilitation plan (RAP) before obtaining your research permit (RP) or authorization to research quarry products (ARPC)?

**Table 1**

No.	Company	Yes	No
1	Cmos	X	
2	Cjcmc		X
3	Feza Mining	X	
4	Bara Mining		X
5	Metal Mining		X
6	Hwachin		X
7	Jmt Sprl		X
8	Belfast Compagny		X
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

Source: our surveys

Looking at Table N°1, 60% of companies claim not to have drawn up the P.A. and PR before obtaining the PR or ARPC. 40% claim to have filed.

It appears that some mining companies have set up operations without having filed their P.A., in defiance of art. 203 of the mining code and art. 406 of the mining regulations.

2ème Question: Did you send your PR to the Direction de Protection de l'Environnement Minier for approval?

**Table 2**

No.	Company	Yes	No
1	Cmos	X	
2	Cjcmc		X
3	Feza Mining		X
4	Bara Mining		X
5	Metal Mining		X
6	Hwachin		X
7	Jmt Sprl		X
8	Belfast Compagny		X
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

From this table N°2, 30% of mining companies have filed their PR with the Direction de Protection de l'Environnement, compared with 70% who have never filed it, in defiance of the provisions of articles 430 and 442 of the mining regulations, following the external cover from which they benefit.

3ème Question: Did you submit your mitigation and rehabilitation plan (RAP) for approval by the political-administrative authorities (PAA) and local communities prior to implementation?

Table 3

No.	Company	Yes	No
1	Cmos	X	
2	Cjcmc		X
3	Feza Mining		X
4	Bara Mining		X
5	Metal Mining		X
6	Hwachin		X
7	Jmt Sprl		X
8	Belfast Compagny		X
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

30% claim to have submitted it, versus 70% who have never submitted it, as stipulated in articles 443 to 449 of the mining regulations, because they have external support.

4ème Question: The Environmental Protection Department monitors and controls the effectiveness of mitigation and rehabilitation measures.

Table 4

No.	Company	Yes	No
1	CMOS	X	
2	CJCMC	X	
3	FEZA MINING	X	
4	BARA MINING		X
5	METAL MINING	X	
6	HWACHIN	X	
7	JMT SPRL	X	
8	BELFAST COMPAGNY		X
9	RUBAMIN SPRL		X
10	KYPENG MINING	X	

The Environmental Protection Department (P.E.) monitors 70% of companies. However, 30% do not. We can see from the above that the DPE has an interest in protecting its environment, as it is part of its heritage.

5ème Q: Have you initiated the transformation of your exploration permit into a PE exploitation permit, PER permis d'exploitation de rejets or AEC autorisation d'exploitation de carrière?

Table 5

No.	Company	Yes	No
1	Cmos		X
2	Cjcmc		X
3	Feza Mining		X
4	Bara Mining		X
5	Metal Mining		X
6	Hwachin		X
7	Jmt Sprl		X
8	Belfast Compagny		X

9	Rubamin Sprl	X	
10	Kypeng Mining	X	

From Table 5, we understand that many companies have not initiated the transformation of their exploration permits into exploitation permits, because they have confused the two.

6ème Question: Did you obtain approval for the environmental impact assessment (EIA) and the project's environmental management plan (PGEP)?

Table 6

No.	Company	Yes	No
1	Cmos	X	
2	Cjcmc	X	
3	Feza Mining	X	
4	Bara Mining		X
5	Metal Mining	X	
6	Hwachin	X	
7	Jmt Sprl		X
8	Belfast Compagny	X	
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

Of this table N°6 80% claim to have obtained approval for an EIA accompanied by a PGEP 20% have never obtained such approval but operate in defiance of art 204 of the mining code.

7ème Question: Were you audited after 2 years of EIA and PGEP?

Table 7

No.	Company	Yes	No
1	Cmos	X	
2	Cjcmc	X	
3	Feza Mining	X	
4	Bara Mining		X
5	Metal Mining	X	
6	Hwachin	X	
7	Jmt Sprl		X
8	Belfast Compagny	X	
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

Of the above, 80% claim never to be audited after submitting their EIC & PGEP. This demonstrates the laissez-faire attitude of state auditors, due to the internal and external influences they are subject to for the benefit of these mining companies.

8ème Question: Are you aware of your responsibilities as an incumbent?

Table 8

No.	Company	Yes	No
1	Cmos		X
2	Cjcmc		X
3	Feza Mining	X	
4	Bara Mining		X
5	Metal Mining	X	
6	Hwachin	X	
7	Jmt Sprl		X
8	Belfast Compagny	X	
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

Of these responses, 60% of our respondents were unaware of the holder's liability, while 40% were aware of the holder's liability. However, article 405 of the mining regulations (rm) stipulates that any damage caused to the environment and, by ricochet, to environmental populations, engages the responsibility of the holder, who must repair it.

**4.2 For Mining Company Employers**

9<sup>ème</sup> Question: Is there a signed employment contract with your workers?

**Table 9**

No.	Company	Yes	No
1	Cmos	X	
2	Cjcmc	X	
3	Feza Mining	X	
4	Bara Mining		X
5	Metal Mining	X	
6	Hwachin	X	
7	Jmt Sprl		X
8	Belfast Compagny		X
9	Rubamin Sprl	X	
10	Kypeng Mining	X	

70% claim to sign the employment contract with their worker. However, 30% use day laborers.

However, after 3 months of uninterrupted service, employers must hire their day laborers.

10<sup>ème</sup> Question: Are your employment contracts submitted to the national employment office?

**Table 10**

No.	Company	Yes	No
1	Cmos		X
2	Cjcmc		X
3	Feza Mining		X
4	Bara Mining		X
5	Metal Mining	X	
6	Hwachin	X	
7	Jmt Sprl		X
8	Belfast Compagny		X
9	Rubamin Sprl		X
10	Kypeng Mining	X	

After signing an employment contract, 70% of companies surveyed said they were unaware of the existence of such a service in Likasi, which they confused with the labor inspectorate or the labor and social welfare department. This is a sign of weak governance in terms of knowledge of the texts.

After signing an employment contract, 70% of companies surveyed said they were unaware of the existence of such a service in Likasi, which they confused with the labor inspectorate or the labor and social welfare department. This is a sign of weak governance in terms of knowledge of the texts.

**4.3 Partial Conclusion**

In this chapter, our concern was to show how we proceeded in our survey. Faced with the difficulty of reaching the entire population, we resorted to purposive sampling. Our questionnaire encountered linguistic problems and the refusal of our respondents to answer certain questions. Despite all these difficulties, we were able to produce the text and understand how the mining sector in Likasi is governed as a whole, and what is at stake in the town's development.

**5. Conclusion**

At the end of our doctoral study in management entitled *Gouvernance du Secteur Minier et Enjeux de Développement Socio - Economique à Likasi (Mining Sector Governance and Socio-Economic Development Issues in Likasi)*, we noted that mining governance is at the heart of several stakeholders' concerns. The DRC is one of Africa's richest countries in terms of natural resources: water, forests and/or mining.

The province of Katanga in general, and the town of Likasi in particular, are rich in mining resources. This wealth should have led to an improvement in the lives of the local population, and above all, the abundance of legislation should have facilitated the establishment of mining companies. But alas! The situation is deplorable. That's why we began our study on governance in the mining sector by using Mintzberg's contingency theory as a reference point, which implies taking the environment into account, as well as social and societal responsibility for better development, and the principle of incidentality, which means that when companies are created, jobs are also created, leading to production that will be used by the population for its own development.

To carry out this study, we used the systemic method (from Guy Rocher & J.W Lapiere), a comprehensive socio-dynamic method that grasps facts and phenomena in their movement, in their process of generation - maturation - degradation. Applied to our study, this systemic method enabled us to explain governance as the result of several interacting factors.

The interdependence between these factors generates good or bad governance in social life. Analysis and understanding of governance in the mining sector cannot be isolated from analysis and understanding of the country's political governance (globality principle). Governance is therefore a fact connected to social and interdependent realities, insofar as if one element goes wrong, it drags down the others, and stability is undermined. We also made use of observation techniques, which enabled us to visualize governance in several forms, the interview as a means of verbal communication and the questionnaire as the keystone of our techniques, as they enabled us to reach a larger number of people.

Our starting point was the observation that, as the DRC is rich in soil and subsoil, minerals are the lever for its development, according to the IFIs. A number of mining

companies are operating in Katanga and Likasi, facilitated by changes in the legal framework, but the population remains poor. This means that there is an observed problem, namely that of governance in the mining sector. Then, our problem as researchers lies in the fact that this proliferation of companies increases job creation, and from this contingency the improvement of lives is guaranteed. But alas! This is not the case. The governance of the mining sector has not brought about the expected socio-economic development.

Our object of study is governance as a dependent variable and the mining sector as our frame of analysis. Socio-economic development issues are independent variables, with the town of Likasi as a control variable. We asked ourselves the following questions:

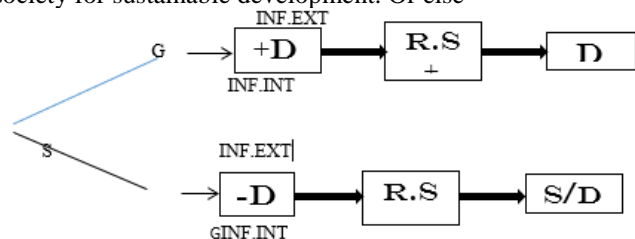
- Why is it that despite the abundance of texts, people's living conditions are deplorable?
- How the mining sector is governed
- And what to do about it.

As an answer: to these questions, or even to this questioning, there is the egocentric greed of those in power, the lack of respect for ethical values linked to the imperialist hegemonic influence that dehumanizes man by objectifying him.

Our thesis is as follows. Socio-economic development is hampered by the interweaving of anti-values. We need a formula:

$$R.V+LC+SCD= DVPT$$

Values reform + cohesive leadership + a dynamic civil society for sustainable development. Or else



When those who govern a given system are influenced (internally and externally) and ignore social responsibility, the stakes of failure in that system are predictable. When they take their social responsibility into account, the stakes of good governance are also predictable.

Our thesis has been structured in two parts, one devoted to a literature review and theoretical framework with 5 chapters, and the second part as a practical framework with two chapters. In Part 1<sup>ère</sup>, Chapter 1 consisted of a notional, conceptual and theoretical mapping. In this first chapter, emphasis was placed on key concepts such as governance, development and the mining sector, and finally on Mintzberg's contingency theory and the principle of confidentiality.

The second chapter, on general considerations of governance, gave us an in depth grasp of the historicity of governance, its dimensions and characteristics, and the indicators of good governance. The third chapter focused on the socio-economic aspects of development, as we discussed the socio-economic development of Likasi. The fourth chapter looked at mining and the issues at stake, the main

players involved, the legal framework and the companies set up in the DRC following the promulgation of law 07/231. Lastly, this chapter focused on environmental and social repercussions.

The fifth chapter traces the link or coherence between three articles and our thesis. The first article deals with the reform of mining legislation in Africa and the role of international financial institutions in the DRC, the second with the reform of the mining sector in the DRC, governance issues and prospects, and the third with governance or public action in the DRC.

The second part, devoted to the practical framework, enabled us to present the mining town of Likasi and the managerial survey carried out in the town. After analyzing the results, we can affirm that our hypotheses concerning the non-observance of ethical values and the egocentric greed of those in power have been confirmed by the crying poverty observed among workers and the population, and by the lack of mastery of the managerial procedure for managing mining companies by the mining companies and their managers.

This confirms our thesis that development is hampered by the intertwining of anti-values such as influence peddling and disregard for the relevant legal texts.

For us, this calls for a reform of values, cohesive leadership and a civiledynamic society. We propose transparent, ecological governance that takes into account indicators such as:

Participation: all men and women take part in the decision-making process, either directly or through legitimate institutions representing their interests. Such broad participation is based on freedom of association and speech, and the ability to participate constructively in decision-making, directly or through legitimate institutions that represent their interests.

The rule of law: legal frameworks should be fair and legal texts impartially applied, in particular human rights laws;

Transparency: transparency is based on the free flow of information. The people concerned can have direct access to the process and institutions, and the information available must be sufficient to understand and follow up on the issues;

Adaptability: institutions and processes must aim to meet the needs of all stakeholders;

Consensus orientation: good governance acts as an intermediary between different interests in order to achieve a broad consensus on what is in the best interests of the group and, where appropriate, on policies and procedures;

Equity: all men and women have the opportunity to improve or maintain their living conditions;

Effectiveness and efficiency: processes and institutions deliver results in line with needs, while making the best possible use of resources;

Accountability: decision-makers in government, the private sector and civil society organizations are accountable to the



public, as well as to institutional stakeholders. This accountability differs according to the organization and whether the decision is internal or external to the organization;

Strategic vision: leaders and the public have a broad, long-term perspective on the good governance of human development, as well as an idea of what is needed for such development. At the same time, they understand the context of this perspective

Our study in no way claims to have covered or exhausted the entire subject of mining sector governance and its impact on socio-economic development. At the very least, it arouses the desire for further research and in-depth study of this subject, because the socioeconomic life of the population is still very mediocre, and the issues of power-sharing and the egocentric greed of leaders subservient to the powers that be remain.

Mining governance is a field of research that is more open to any researcher interested in the socio-economic development of peoples, because the socio-economics of development is a special sociology that stems from the sociology of development.

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