THE SOCIAL AND ENVIRONMENTAL ISSUES CAUSED BY SICOMINES MINING IN LUALABA:
The unbearable living conditions in YENGE and KAPANGA villages

AFREWATCH
FEBRUARY
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ACKNOWLEDGEMENTS

AFREWATCH heartfully thanks all the persons or NGO partners that efficiently contributed in elaborating and publishing the current report. Special thanks to WELLSPRING for the financial support.

AFREWATCH are also thanks the members of the local communities in Yenge and Kapanga around SICOMINES for their role as primary victims and for their collaboration in the implementation of this program.

Finally, we are grateful to Céline TSHIZENA and Jean Pierre LWAMBA for the field surveys and editing this report, to Richard ILUNGA and Emmanuel UMPULA for their positive comments.

Emmanuel Umpula Nkumba
Executive Director
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<thead>
<tr>
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<tr>
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EXECUTIVE SUMMARY

As part of its support program for local communities around the extractive industries, AFREWATCH focuses mainly on monitoring the legal obligations of companies vis-à-vis the riverside communities.

Two studies were conducted, the first one in 2016 on the issue of environmental protection by SICOMINES\(^1\) and the second one in 2020 on the analysis of the Sino-Congolese Agreement and its evaluation in relation to how the obligations of the parties to the 2008\(^2\) collaboration agreement were implemented.

After the publication of the reports on these two studies, AFREWATCH conducted field investigations on the villages of Yenge and Kapanga, which are located near the SICOMINES facilities in the Province of Lualaba.

This report describes the problems caused by the company’s mining operations on the environment and the health of the inhabitants of Yenge and Kapanga. These folks decry the way SICOMINES operated, which continues to have a negative impact on their health and their environment.

The field investigations helped not only to get in touch with the local victimized communities but also to proceed to a sampling of water, soil and roofing sheet and to have them analyzed in order to evaluate the degree of toxicity of the discharges of the SICO company on the environment to identify the impact that this could have on health as well as on the environment in Yenge and Kapanga.

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\(^1\) SICOMINES face au défi du millénaire : Après avoir pollué l’environnement, comment l’entreprise a bafoué les droits des communautés, Survey Report by AFREWATCH in 2017.

RECOMMANDATIONS

After analyzing the legal framework and the documented human rights violations, AFREWATCH makes the following recommendations:

To the DRC Government:
• Conduct surveys in the two villages with the impacted communities to assess the degree of the pollution and the problem;
• Find replacement farmland for all the farmers in Yenge village and Kapanga village who are victims of the destruction of their fields, in collaboration with the communities’ representatives and SICOMINES;
• Require from SICOMINES to relocate the local communities of Yenge village and Kapanga village in accordance with the procedure set out in Article 281 of the Mining Code and provided for in Annex XVIII of the Mining Regulations;
• Make sure the relocation procedure runs smoothly by caring for the protection of the local communities’ rights as provided for in the Mining Code and Regulations as well as in the directive on relocation;
• Make sure SICOMINES respects its Environmental Impact Assessment and its Mitigation and Rehabilitation Plan.

To DPEM (Mining Environment Provincial Office):
• Conduct a control audit of the mitigation and environmental rehabilitation work by SICOMINES

To SICOMINES:
• Inform the local communities in Yenge and Kapanga of the contents of its Environmental Impact Assessment as well as the planned Mitigation and Rehabilitation Measures;
• Conduct a field survey on the communities’ social, economic and environmental complaints and report the findings to the public;
• Initiate the relocation procedure for the local communities of Yenge and Kapanga in accordance with Article 281 of the 2018 Mining Code and Annex XVIII of the Mining Regulations;
• Provide the local communities of Yenge and Kapanga with alternative farmland for the continuation of their agricultural activities;
• Make an inventory of people whose health is affected by the mining operation and ensure their medical care;
• Make an inventory of the farmers who were victims of the destruction of the fields and organize fair compensation.
I. INTRODUCTION

1.1. Context of the Study

This report describes the problems caused by the mining operation of SICOMINES on the environment and the health of the severely impacted communities in Yenge village and Kapanga village, in the Province of Lualaba.

In 2008 the Democratic Republic of Congo (DRC) signed a cooperation agreement with the Group of Chinese Companies (CREC and SINOHYDRO) financed by Exim Bank\(^1\), with a focus on two projects: achieving infrastructure for the Democratic Republic of Congo and developing a joint mining project SICOMINES-GECAMINES (the Quarries and Mines General Company).

Acid spills are reported to have been regularly poured into the Kalemba River near the village of Yenge (since 2016) and have caused lots of damage, according to local sources.

The inhabitants that were interviewed in Yenge and Kapanga said that they suffered every day from environmental and health problems.

Alerted to the situation by the communities, as of March 11 to 15, 2021 AFREWATCH went on a field trip to the Lualaba province in order to document the environmental impacts caused by SICOMINES.

1.2. Objectives

Overall, this study consists of contributing in the improvement of the living conditions of the communities in Yenge and Kapanga villages by protecting their social and economic rights. For this purpose, a survey was conducted in order to:

- Document the riverside communities’ complaints on the social, economic and environmental impacts that are caused by various acid spills into Kalemba river from SICOMINES;
- Elaborate a documentation report on all these complaints by the communities by indicating the negative impacts of acid spills in the environment around Yenge and Kapanga villages;
- Analyze the facts to prove the causal link between these spills and the negative impacts on the local communities.

1.3. Research Methodology

As of March 11 to 15, 2021, the AFREWATCH team conducted interviews with members of the communities in Yenge and Kapanga. They combined different techniques so as to achieve the expected results, notably: direct observation, interviews with victims, and the collection and the laboratory analysis of water, soil and roofing sheet samples. These were analyzed in internationally renowned laboratories and the results interpreted by experts from Environmental Law Alliance Worldwide (ELAW). They compared the results to the Canadian standard and the World Health Organization (WHO) standards.

It should be noticed that the air around the company was not analyzed, even though the communities also complained about it.

\(^1\) Exim Bank is a Chinese Bank.
II. PRESENTING SICOMINES AND THE VILLAGES IMPACTED BY THE COMPANY

2.1. SICOMINES

SICOMINES is a partnership company named Sino-Congolaise des Mines (Sino-Congolese of Mines). It is a limited liability company (SARL) under Congolese law and is registered at the New Trade Register of Lubumbashi under number 0369². Its head office is currently located at number 2432, Avenue Mama Yemo, in Lubumbashi, the Province of Haut-Katanga.

The SICOMINES project holds Mining Permit 9681 on 7 mining plots and Mining Permit 9682 on 6 mining plots for the work in the Mashamba West and Dikuluwe Mashamba deposits not far from the city of Kolwezi, precisely in Kapata, about 350 km away from Lubumbashi, Haut-Katanga³.

SICOMINES was created jointly by the Consortium of the Chinese Companies composed of CREC, SINOHYDRO and GECAMINES. The Congolese company was chosen by the DRC Government as their stakeholder in this “natural resources in exchange for infrastructure” partnership. SICOMINES has a share capital of 100 million US dollars. To date, CREC holds 41.72% of the shares, SINOHYDRO 25.28%, ZHEJIANG HUAYOU 1% and the Congolese party 32%.

The SICOMINES copper-cobalt mine happens to be one of the richest mines in the world. With a total area of 11.5 kilometers², it is estimated to have 250 million tons of ore reserves, including copper with a grade of 3.22% and cobalt with a grade of 0.192%. Its copper yield can reach up to 8.55 million tons while the grade for cobalt is 0.51 million tons.⁴

The model of this project was presented as innovative for the DRC, insofar as it would help the country to have modern infrastructure in exchange for minerals for the Chinese party. Infrastructure has been built in Kinshasa, for example. But the 2014 report by ASADHO (the African Association for Human Rights) on the issue notices several risks in terms of quality and real costs of this infrastructure.⁵

In the Lualaba province where the mining project is developed, there are so many negative impacts. Almost no infrastructure has been built apart from the ‘Busanga Hydroelectric Dam’ with an estimated capacity of 240 MW energy, whose 170 MW will be destined for SICOMINES. None of it is destined for the local communities.⁶

2.2. YENGE village

Yenge village is located 7km away from the SICOMINES facilities. It has 105 houses and around 800 inhabitants⁷ most of whom are women and children.

This village originates in 1990⁸ prior to the coming of SICOMINES to this zone. Formerly, the livelihood of the communities in Yenge was farming, fishing, hunting and selling farm products. But, ever since SICOMINES came and started acid spills in the environment which destroyed their means, the living conditions of the inhabitants have become too hard.

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³ Environmental Impacts Studies by SICOMINES, page 5
⁴ (sicomines.com) read on Avril 14, 2021
⁵ http://congomines.org/system/attachments/assets/000/000/630/original/ASADHO-RAPPORT-SUR-LES-INFRASTRUCTURES-SICOMINES-I.pdf?1430929440
⁶ https://afrewatch.org/pas-au-courant-pas-de-courant-analyse-critique-de-la-gouvernance-du-projet-hydroelectrique-de-busanga/
⁷ Interview with the head of Quartier Yenge, MBELENGE TCHAMBALA.
⁸ Interview with the head of Quartier de Yenge, MBELENGE TCHAMBALA.
This village faces problems of environmental pollution, health, lack of drinking water, failure of access to healthcare, education and employment, etc.

2.3. KAPANGA Village
Kapanga village is located around 100 meters away from the SICOMINES facilities. It has 258 houses and around 1000 inhabitants.  

Most of the population are women and children whose livelihood is farming. The houses covered with straw and a few have roofing sheets with inadequate quality. Most of the households living over there have neither jobs nor income providing activities, which makes them depend on artisanal mining and agriculture.

III. ENVIRONMENTAL AND HEALTH ISSUES LINKED TO THE OPERATIONS BY SICOMINES
Ever since SICOMINES came, the communities in Yenge and Kapanga have been complaining about the degradation of the quality of water, air, farmland and their health status due to the company’s mining in this area.

Article 204 of the Mining Code emphasizes that: “Any applicant for an Operating Permit, a Discharge Operating Permit, a Small Mine Operating Permit or a Quarrying Authorization is required to submit an Environmental Impact Study accompanied by an Environmental Management Plan for the project and to obtain approval for its ESIA and ESMP as well as to implement the ESMP...”.

Article 25g of the Mining Regulation adds by requiring the following: “The summaries of the ESIA, ESMP and RAP are published on the website of the CTCPM (Technical Office for Mining Coordination and Planning) and of the holder if any”. When published, this information would help the citizens to understand the risks that they face and the mitigation measures planned by the Chinese mining operator.

Despite legal obligation, the SICOMINES ESIA and ESMP syntheses are not accessible. For the lack of references on the possible negative impacts by SICOMINES on the communities, the AFREWATCH team conducted interviews with the communities, NGOs and the local authorities. Moreover, they took and analyzed samples, interpreted water, soil and roofing sheet samples.

3.1. Health Issues
The health status of the local communities of Yenge and Kapanga villages is very worrying. Women, men and children suffer from various diseases that are probably caused mainly by the use of contaminated water, the consumption of agricultural products affected by toxic chemicals as well as the permanent exposure to the toxic fumes emitted by the SICOMINES plants.

The communities in these two villages use either well water or river water for various household needs such as drinking, bathing, washing, etc. Yet, Kalemba River near the fields of the inhabitants of Yenge, is strongly contaminated by the acids that pour out of the SICOMINES basin. Following the regular discharge of acids into this river, SICOMINES officials even prohibited the use of this water as well as the consumption of the products that come from the fields by the riverside communities. The last worrying case of pollution dates back to September 2017 when the spill of toxic chemicals was caused by the overflow of the basin and flooded the rivers and fields of the communities. Since then, there has been no satisfactory compensation for health problems, nor for the destroyed fields and their products.

Furthermore, no other compensatory measures have been taken by the company to compensate for the need for water and the destroyed cultivation areas. Apart from site visits and unfilled promises, no other concrete action has been taken by the local or national public authorities to protect these two communities. For lack of

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9 Interview with the secretary of the head of Kapanga village, TSHIKULA POMPON.
10 Interview in the focus-group in Yenge village on March 13, 2021. 54 participants (20 women and 34 men).
11 Les défis du millénaire : une entreprise bafoue les droits des communautés locales.
alternative solutions, the communities continue to use this water, even though it is not suitable, and consume field products, particularly cassava, which is also affected by the company’s mining operations.\textsuperscript{12}

During the focus groups, several health problems were mentioned by the local communities. In general, the populations of both Yenge and Kapanga suffer from cough, cold and itching, internal and external infections, abortions, pain in the bones, and sexual impotence in men.

Women and girls suffer particularly from vaginal infections and disturbances of menstrual cycles, abortions, etc. For some girls, for example, menstruation comes out in the form of blackish pebbles and is often accompanied by pain in the lower abdomen.\textsuperscript{13}

Other women suffer from itching and pimples. The most persuasive case is that of Mrs. Jac-

\textsuperscript{12} Interview on March 13, 2021 in Yenge with a woman who wanted to remain unnamed.
\textsuperscript{13} Idem.
\textsuperscript{14} Interview with Mrs KAYAMBA Jacquie in the focus-group in Yenge on March 13, 2021.
\textsuperscript{15} Interview with Mrs KAMINA MAZANGA, the kid’s grand-mother, in the focus-group on March 13, 2021 in Yenge village.

This is also the case of MBELENGA TSHIABAM-LA, a 4-year-old child who, after having used the water of Kalemba river, developed whitish spots on his body in the form of ringworm and which tickle. For lack of money for proper medical care, this child continues to suffer.\textsuperscript{15}

Despite this population’s complaints and the diseases, they suffer from because of the environmental pollution by SICOMINES, they receive no assistance whatsoever from the company or the Congolese government. Due to the lack of money and of a health center in the village,
the victimized population does not seek medical care and their health status deteriorates further. However, article 47 of the DRC Constitution guarantees everyone the right to health\textsuperscript{16}, which mining companies are also obliged to respect and preserve.

According to the findings from the laboratory analysis of the samples, the presence of undesirable substances with concentrations above the thresholds determined in the WHO guidelines is noticed in the water that is consumed by the inhabitants in Yenge. Traces of mercury (Hg) and selenium (Se) were found, which respectively have serious impacts on human health insofar as they are the cause of several diseases, including those related to kidneys (tubular necrosis, proteinuria, hyperalbuminuria), hemorrhagic gastritis, benign tumors, myocardia, gastrointestinal disorders, skin discoloration, dental caries, and hair and nail loss.

These results also show that pH is too acidic because it is below the norm (6.5), which would cause skin irritations noticed in some people in Yenge.

3.2. Impacts on the crops

Because of the acid that SICOMINES pours into Kalemba River that is located next to the fields of Yenge village, the crops of several fields rot and the soil is no longer fertile. The farmers complain about the destruction of their crops and the reduction of their harvests. According to them, the soil is no longer rich because of the acid that comes from SICOMINES, but also because of the toxic fumes that comes from the plant of the same company. “Since the arrival of this company our fields have dropped significantly. Our fields no longer produce as much as before, which does not help us to provide for our households”\textsuperscript{17}, Mr. TSHIBAMBA Noël said during the focus-group. He is a community member.

The analysis of soil samples from Yenge village show a high concentration of Cobalt which also exceeds the normal threshold of the WHO standard.\textsuperscript{18} The bottom line is several health problems, including vomiting and nausea, eyesight problems, heart problems, thyroid deterioration, etc. Radiation from radioactive cobalt isotopes can cause infertility, hair loss, vomiting, bleeding, diarrhea, coma and even death.

In Kapanga, even though the farmers were compensated for the plundering of their fields, the money was insignificant and they continued their farm work near the company’s concession, not far from where SICOMINES has built a new acid basin. The company should relocate them.

\textsuperscript{16} See Article 47 of the DRC Constitution as revised and completed in 2011.

\textsuperscript{17} Interview with Mr TSHIBAMBA Noël, farmer and inhabitant of Yenge village.

\textsuperscript{18} WHO, Guidelines for drinking-water quality, ed. 4, 2017. https://www.who.int/water_sanitation_health/publications/drinking-water-quality-guidelines-4-including-1st-addendum/fr/
3.3. Spoliation of the crops
In 2016, in Kapanga village, fields belonging to several farmers were spoliated by SICOMINES under the pretext that they were in its concession. The inhabitants of this village lost several stretches of fields, while they live mainly from agriculture. According to the farmers concerned by this measure, the loss of their fields so hugely impacted the economy of households that they can no longer provide for their multiple needs and they cannot afford education for their children. They accuse SICOMINES of stripping them of their main livelihood without fair compensation.

It should be noted that the compensation of the farmers which took place shortly after the plundering of the fields did not meet the expectations of the owners of the fields. Although the looted fields were several years old and contained several crops, SICOMINES gave them lump sums in between 10 and 400 American dollars.

Yenge village, SICOMINES forbade the communities to access their fields and consume their products. In Yenge village, SICOMINES forbade the communities to access their fields and consume their products. In According to the company, water and the soil, including the crops, were already affected by the acid that regularly flows into Kalemba River from the basins. Yet, these fields are the main livelihood of these communities. In the absence of other resources, the inhabitants of Yenge continue to consume the products of their fields even though they have been declared affected by the acid despite the prohibition by SICOMINES.

In March 2021, the company’s Social Department had a meeting with the leaders of the riverside villages as well as the chief of Yenge village. During the meeting, SICOMINES promised agricultural assistance and the drilling of wells. For the communities, especially in Yenge, agricultural assistance is not a priority since the soil is already polluted by acids, however they demand a relocation which unfortunately is not envisaged by SICOMINES.

IV. PRESENTING THE FINDINGS OF THE WATER, SOIL AND ROOFING SHEET ANALYSES
In order to evaluate the degree of toxicity in the discharges of SICOMINES in the environment and eventually identify its impact on human health and the physical environment, the AFREWATCH research team took water, soil and roofing sheet samples in Yenge and Kapanga, got them analyzed by the Robinson International laboratory and the Chemoptix ID laboratory, and got them interpreted by Environmental Law Alliance Worldwide (ELAW). The findings will help to determine the link between the pollution of the environment and the numerous diseases from which the local communities suffer and the other diseases that will come as days go by.

of analysis of samples produced by as well as their interpretation by. The results of the analysis of the samples taken in Yenge and Kapanga,
mainly from Yenge, presented below, will allow us to establish a link between the environmental pollution and the multiple health problems that the local communities are already suffering from and others that could manifest themselves over time.

4.1. Soil samples

These results show the presence in the soil of metallic traces of cobalt at high concentrations. Compared to the WHO standard, a significant exceedance of the cobalt value is noticed. Several health risks may result from this.

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These results show the presence in the soil of metallic traces of cobalt at high concentrations. Compared to the WHO standard, a significant exceedance of the cobalt value is noticed. Several health risks may result from this.

4.2. Water samples

According to these results, water in Yenge is acidic with a 6.3 pH, which is below the minimum value of 6.5. As far as the population’s health status is concerned, this can lead to health problems such as skin irritations.

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26 See the WHO standards on drinking water, updated in 2006.
There is also a high concentration of Mercury (Hg) and Selenium (Se). The presence of these two pollutants in water with such a concentration makes the populations run several health risks, mainly kidney diseases (tubular necrosis, proteinuria, hyper albuminuria), hemorrhagic gastritis, benign tumors, myocardia, gastrointestinal disorder, skin discoloration, dental caries and hair and nail loss.

4.3. Roofing sheet samples

It can be noticed that high levels of chlorine, fluorine, nitrate and sulphate on roofing sheets are the result of atmospheric fallout from mining discharges into the atmosphere, reflecting the heavy pollution of the air by dust and industrial fumes. These pollutions fall back on the ground, in streams and rivers as well as on plants, which contaminates the trophic chain for animals and humans and causes corrosion of metals.

4.4. Impact on the environment

As for Chlorine, repeated exposure to chlorine in the air can affect the immune system, blood and respiratory system of animals. It can cause environmental damage with low concentrations and is especially harmful to organisms living in water and soil.

It takes long for fluoride to disappear in the air, and then enter it enters water and soil sediments and can accumulate in plants that are sensitive to fluoride exposure. Even low concentrations can cause damage and impede growth. Animals consuming plants containing fluoride accumulate it in their bones and suffer from tooth decay and bone degradation.

When it comes down to nitrate, the input of nitrogen into the environment has several effects including change in the composition of certain sensitive species in animals, which causes the decrease of oxygen transport in blood and vitamin A deficiency. They can be transformed into nitrosamines, which are seriously carcinogenic substances.

<table>
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https://www.who.int/water_sanitation_health/publications/drinking-water-quality-guidelines-4-including-1st-addendum/fr/
4.5. Health risks

In inhaling gases contaminated with chemicals such as Cl, F, NO3 and SO4, the population is exposed to the risks of nervous system, immune system, blood, heart and respiratory system diseases.

Sulfate is neurotoxic and causes eye diseases, reproductive diseases, immune system diseases, suffocation and pulmonary embolism. Nitrates increase the severity and the frequency of asthma attacks and pulmonary infections. All these gases are water soluble and penetrate the bronchioles to the alveoli and have oxidizing and penetrating properties due to their small diameter.

V. CONCLUSION

In addition to the social problems faced by the local communities in Yenge and Kapanga, which are reflected in the lack of drinking water, sanitary and educational infrastructure, as well as the lack of employment, they are also victims of the negative impacts of the mining operations by SICOMINES. Ever since this company came, these communities have been facing serious health and environmental problems. Following the pollution of their living environment by acidified water and toxic smoke from the SICOMINES plant, the local communities, particularly those in Yenge, suffer from several illnesses such as: itching of the skin, pimples, cough, cold, internal and external infections, abortion, pain in the bones, sexual impotence in men, etc.

Those in both Kapanga and Yenge are victims of the loss of their fields and the destruction of their crops, such as cassava rotting in the ground in Yenge. To date, these communities face indescribable suffering to which the company and the Congolese State do not pay attention.

Despite all these complaints, SICOMINES did not react. The company has made nothing for reparation or compensation, welfare or medical care for the communities in Yenge.

In Kapanga, no other action has been initiated by SICOMINES to reduce the negative impacts of these activities on the environment and health in the local communities apart from the compensation that the owners received for their fields that had been looted by SICOMINES. As for the compensation, it was not properly made.

On the side of the Congolese State, no concrete measures have been taken to compel SICOMINES to respect the rights of the local communities and to repair the damage caused by its operations on the environment and health. Due to carelessness of both the DRC and SICOMINES, the health and the environmental situation of the communities in Yenge and Kapanga has been deteriorating more and more.