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Mining operations in the department of Dabakala in north-eastern Côte d'Ivoire: Community resilience tested by environmental impacts in the village of Oualéguéra

Bouhi Sylvestre Tchan BI[1], Lohoues Olivier Essoh[2]

[1] Lecturer-Researcher, Assistant, Department of Anthropology and Sociology, Communication and Society Faculty, Alassane Ouattara-Bouaké University (Ivory Coast), Member of LAASSE (Laboratory of Economic Sociology and Anthropology of Symbolic Belongings), Bouaké, Côte d'Ivoire

[2] Lecturer-Researcher, Senior Lecturer, Faculty of Social Sciences and Humanities, Jean-Lorougnon Guédé University (UJLoG)-Daloa, Member of LaReSS (Society and Security Research Laboratory), Bouaké, Côte d'Ivoire

Abstract

The agricultural potential of the Dabakala department relies mainly on cashew nuts, food crops, and market gardening. In addition, the predominance of gold deposits, rapid population growth, and sustained labor migration have encouraged the development of mining in this area of northeastern Côte d'Ivoire. However, the socio-economic resilience of the affected villages is caught between the environmental impacts of regular and irregular gold mining. This article therefore aims to analyze the environmental impacts on the economic and social development of certain villages, in this case Oualéguéra. To do this, the study uses a qualitative approach focused on direct observations, focus groups, and group and individual interviews. Using a sample of 40 people interviewed, it first describes the noise pollution from regular mining operations, which has an impact on the stability of domestic habitats and school infrastructure in the village of Oualéguéra. It then shows that these environmental impacts weaken community resilience in terms of housing development and agricultural production. These impacts undermine local environmental preservation and management practices within these communities.

Keywords: Mining, environmental impacts, resilience Socio-economic resilience, oualeguera, (dabakala-ivory coast)

Introduction

The department of Dabakala is a predominantly agricultural area, socially connected to cashew cultivation as its main cash crop. With particularly rich soil and abundant lowlands throughout most of the region, it also builds its economic wealth on food crops (yams, cassava), cereals (corn, rice, peanuts, etc.), market gardening, and the predominance of gold-bearing subsoil (Anader, 2024) [1].

According to the national report on climate action assessment in Côte d'Ivoire, the country is among the most vulnerable to climate change. It is ranked 147th out of 178 countries. This vulnerability, the report notes, is accentuated by the structure of its economic fabric (mainly dependent on agriculture) and the weakness of its response system to extreme weather events (RNEACCI [1], 2024). Like all regions of Côte d'Ivoire, the department of Dabakala is also suffering the effects of global warming (PND 2021-2025, p.169). Under this leadership, the first observation shows that the agricultural sector is particularly affected, with a significant decline in production of both cashew nuts and food and market crops due to the reduction in arable land and soil infertility (Anader, 2024) [1]. Indeed, a comparative analysis of the reduction in arable land in the department of Dabakala indicates that in 1970, yams, for example, were grown on 10,000 hectares of land, whereas in 2024 they will be grown on 4,023 hectares. Cassava, which in the same period was grown on 2,600 hectares, will be grown on 447 hectares in 2024 (PND [2] -2024-2025). 447 hectares (PND-2024-2025).

Another finding shows that the resilience of local communities to the consequences of global warming on agricultural production is developing on two levels. First, informal economic interest groups have been set up in several villages. We counted more than 41 groups in ten villages identified as being impacted by mining activities. Five villages are defined as being directly impacted by the activities of the Lafigué Mining Company, namely Lafigué, Sokorogo, Fenessiguedougou, Tolledougou, and Oualeguera, and five other villages are recognized as indirectly affected, in this case (Karpélé, Logné, Faboudougou, Tossiondougou, and Gboly-Carrefour).

These are socio-economic groups whose purpose is the production and sale of market garden produce, cashews, rice, and corn. These groups provide a framework for mutual aid and solidarity, fostering economic sociability among members of the same society. They are microeconomic structures that bring together young people, women, and men for the production and marketing of cashews and food crops.

Secondly, the second form of community resilience has resulted in increased illegal gold mining since the establishment of the Lafigué mining company (SML), a subsidiary of the Endeavour Mining group, in the department of Dabakala in 2023 [8]. It should be noted that before this company set up, village communities practiced gold mining as a traditional activity alongside cashew farming. Subsequently, gold panning was banned in favor of regular mining of the deposit by SML under permit PE-58, in accordance with Law No. 2014-138 of March 24, 2014, on the Ivorian Mining Code. This reappropriation of the mining site by SML led to the emergence of illegal gold panning as a strategy for socio-economic resilience among young people in the affected villages (T. K. Koulibaly, 2025, pp. 329-330) [10]. Furthermore, according to the literature, legal mining and particularly illegal gold mining have environmental consequences. These activities

contribute to the degradation of both the human and natural environment (Endeavour Mining and H&B Consulting, 2023, p. xii, O. Ouattara, B. Kambire, p. 204; Y. G. ASSI *et al*, 2025, p.35) [2, 8]. This study takes place in the village of Oualéguéra, which is experiencing specific types of environmental impacts linked to both global warming and mining. In this regard, pockets of socio-economic resilience are being implemented by local communities, particularly in the construction of housing, school infrastructure, and road improvements, but also in the economic sphere, notably in the production and sale of agricultural products. These various observations raise the following problem: despite the socio-community resilience mechanisms at work in the village of Oualéguéra to counter the adverse effects of global warming on declining agricultural production, it is clear that these resilience mechanisms remain hampered by the environmental consequences of mining. This paradoxical situation shows that these environmental impacts are the driving force behind the weakening of community resilience within this village.

In light of this problem, the main question guiding this research is as follows: What are the environmental impacts of regular and illegal mining of the deposit and their implications for community resilience in the village of Oualéguéra in the department of Dabakala? The following subsidiary questions are particularly relevant: What are the noise impacts in the village of Ouaéleguéra? How does illegal gold mining affect forest cover and soil in the village of Oualéguéra? How do these environmental impacts weaken the community resilience of the local populations in these villages? In this report, this study first describes the environmental impacts of mining in order to then identify how these impacts weaken community resilience in the village of Oualéguéra.

Methodology

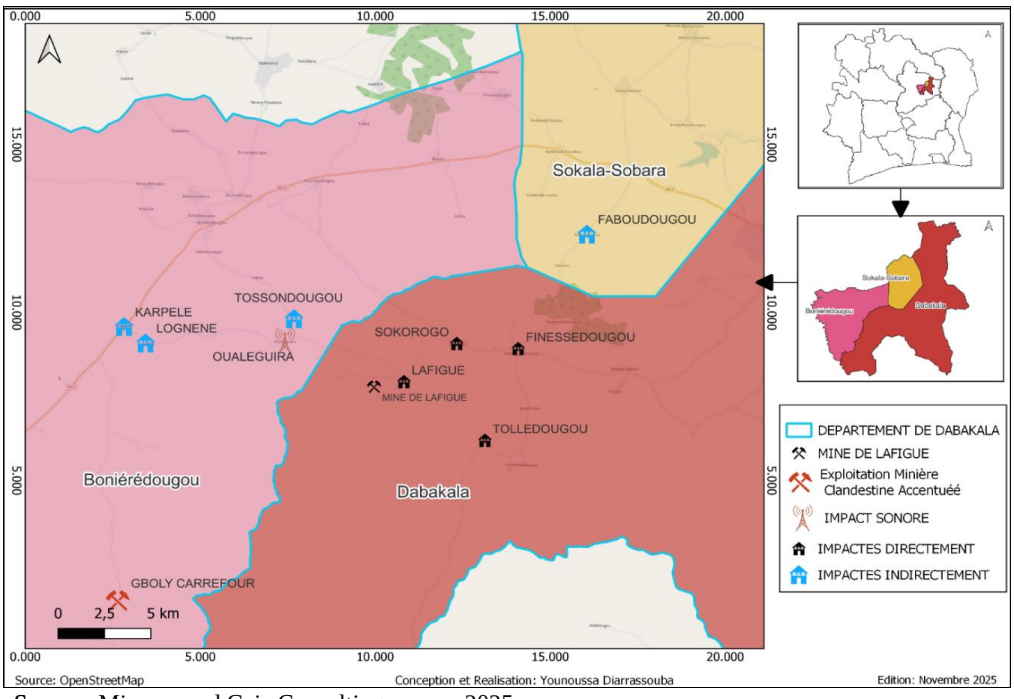
1. Study sites

The study is being conducted in the department of Dabakala, located in northeastern Côte d'Ivoire. It is bordered to the south by the departments of Bouaké, Prikro, and M'Bahiakro, to the west by Katiola, to the east by Bondoukou and Bouna, and to the north by Niakaramadougou and Kong. Dabakala is divided into three sub-prefectures: Dabakala, Boniéredougou, and Sokala-Sobarara. This area is mainly populated by the Djimini ethnic group, which belongs to the larger Voltaic group of Côte d'Ivoire. The village covered by the study is located in the sub-prefecture of Boniéredougou. It is the village of Oualéguéra.

1.1. The village of Oualéguéra

In the local Djimini language, Oualéguéra means "*I am leaving here, but I have not told anyone to follow me*." According to a group interview with the chiefs, this phrase was uttered by an old man who wanted to leave his village of origin (Kokolo), where untimely conflicts were raging, for a quieter and more peaceful place located about 5 km from the site. This new place, now called Oualéguéra, symbolizes a hiding place to escape the horrors of war during the time of Samory Touré and the abuses of the colonial administration. The village is part of the Kakala canton, which comprises four villages (Oualéguéra, Tossiondougou, Kokolo, and Tchêkelé). The canton chief resides in Kokolo (the village of origin of the four localities), while the central land chief is located in Oualéguéra. The village has a population of 1,166, including 596 men and 570 women (ANSTAT [3], RGPH [4], 2021). It is located nearly 11 km from the sub-prefecture of Boniéredougou and 6 km from the Lafigué mining company site. This village was chosen because it is particularly affected by noise pollution, in addition to other types of impacts experienced by other villages directly affected by the mine's regular activities.

Map: Villages directly and indirectly affected by mining activities in the department of Dabakala



Source: Minerva and Gaia Consulting survey, 2025

2. Data collection and analysis

The study is primarily qualitative and relies on collection techniques such as direct observation and semi-structured interviews. Under this approach, the work used an observation grid and an interview guide as tools to observe, respectively, the types of noise impacts associated with the exploitation of the mineral deposit by the Lafigué mining company in the village of Oualéguéra, the impacts on forest cover and soil caused by illegal gold mining, and to understand the influence of these impacts on community resilience. To this end, the study conducted group interviews, focus groups, and individual interviews in the village. For the group interviews, we interviewed the village leadership, consisting of the chief, the land chief, and the notables who are the representatives of the various family heads (8), and the village development association, including its president and five of its members (6). (6). We then held focus groups with women (12) and young people (12). Next, we conducted individual interviews with school administrative staff, including (1) primary school principal and (1) preschool principal. The qualitative sample was therefore constructed around (40) people selected according to the principle of empirical saturation (A. Pires, 2007, cited by M. Cordière, N. Larivière, 2014). This number is the result of the strong mobilization of local populations in the focus group due to their interest in the subject matter, but also due to the time we had available (two days) to conduct interviews in the village: one day for mobilization and one day for interviews. This is a reasoned sampling based on availability and willingness to participate in the interviews on the one hand, and knowledge, mastery of the subject, and the objectives sought on the other. It is characterized by the principle of randomness. These are groups whose characteristics have not been defined in advance, which are available and present at a specific location (P. N'da, 2006, p.105) [13]. Thematic content analysis was used to identify the different parts of the results. This involved cross-cutting what, from one interview to another, refers to the same theme (the various environmental impacts and the weakening of community resilience) in order to minimize the singularity of the actors' discourses and to seek thematic consistency between interviews in line with the stated research objectives (A. Blanchet, A. Gotman, p.99).

Results

1. Regular mining operations and noise pollution in Oualéguéra

1.1. Vibrations and their impact on infrastructure stability

The Lafigué Mining Company (SML), a subsidiary of the Endeavour Mining Group, has been operating in the Dabakala department since 2023 [8]. The regular mining of ore undertaken by this company is governed by Law No. 2014-138 of March 24, 2014, on the Ivorian Mining Code. Although it is located on land belonging to the village of Lafigué, it is the village of Oualéguéra that suffers most from the noise pollution caused by the mining operation. The regulatory and institutional framework under the mining code articulates SML's mining practices in accordance with the noise thresholds of the regulations in force in Côte d'Ivoire, those recommended by the IFC [5] HSE Standards Guide (2007) and UK standards (BS5228-1:2009+A1:2014). In this regard, according to the noise criteria of CIAPOL Decree No. 01164 of November 4, 2008, noise production in urban residential areas, with workshops or professional uses or with some cases of air traffic/waterways/roads, and in rural communities, is limited to 60 decibels during the day, 55 decibels during intermediate periods, and 45 decibels during nighttime periods. Direct observations on site, combined with semi-structured interviews, show that blasting operations related to the extraction of waste rock and ore, as well as their unloading at the ends near the waste rock deposit platform, sometimes take place in the mornings and evenings. That said, they occur regularly in the afternoon between 1 p.m. and 2 p.m. These observations reveal that, when these operations are carried out, it is possible, at certain receivers, to observe exceedances of the thresholds in the evening and at night.

The noise and vibration management and control plan will demonstrate compliance with the thresholds, and any exceedances must be identified and mitigation measures implemented where necessary. These mitigation measures will be in line with the 2014 Ivorian mining code. (Comments from an agent of the Lafigué mining company).

These threshold exceedances produce vibrations that affect the stability of school infrastructure, buildings, and homes of people living in the village of Oualéguéra, located near the waste rock disposal platform. This results in large cracks in buildings and homes, the removal of roofs, and even the destruction of huts or buildings constructed without reinforcement.

This is evidenced by the statements of the village chief of Oualéguéra and the images taken for this purpose:

And then when they set off their explosives there, when the explosives go off with a “boom,” the metal sheets shake and the walls shake, and dust falls on you like this. This has caused many walls to collapse, especially the geo-concrete ones that have no chaining. The houses that we didn't pour chaining on top of, there isn't one that isn't broken. If you see that it's cracked a little, it means there's chaining on top of it, but people live in these houses anyway.

These photos show the impact of vibrations caused by regular mining operations on the stability of habitats in the village of Oualéguéra.

1.2. The social construction of noise as a sleep disruptor and driver of employability within the mine

Decree No. 2016-791 of October 12, 2016, regulating neighborhood noise emissions, stipulates in Article 11:

> No noise shall, by its duration, repetition, intensity, or vibration, disturb the peace of the neighborhood or the health of humans, in a public or private place, whether caused by a person themselves or through a person or thing in their care or an animal under their responsibility.

This decree identifies two indicators of noise pollution: noise and vibration. Although the village of Oualéguéra is affected by vibrations from the blasting of waste rock, it is equally affected by noise. In this village, noise pollution associated with mining is reflected in the noise from vehicle engines, the loading and unloading of rock into steel dump trucks, slides, and electricity generation.

The following quotes from the president of the Oualéguéra village development mutual fund illustrate this argument:

> "Honestly, ever since the mine started operating near our village here, the noise has been very tiring for us. It started in 2024 and continues to this day. We hear the noise of the machines all the time. The noise there, often when you wake up between 1 and 2 a.m., you can't sleep anymore. It's at those hours that the noise there is loud, and then often when you're in the field and they're breaking stones there, it makes a big noise, it makes your heart skip a beat and you get scared. It's true that they warned us from the start, but when they start, no one knows about it and it takes everyone by surprise. It's because of the noise that our village is among those directly affected. Because of all this, we are asking them to give our children jobs at the mine there.

This excerpt illustrates the fact that noise is a social phenomenon in the sense that it also has a health dimension. The residents of the village of Oualéguéra perceive noise as something that disturbs their sleep and causes constant stress. This creates an obstacle to their moral and physical well-being. This observation shows that noise, far from being a natural phenomenon, is a social construct. Indeed, in light of the IFC's policies and performance standards on social and environmental sustainability, which highlight the principle of “do no harm” to people and the environment and the fact that negative impacts must be avoided whenever possible, and if these impacts are unavoidable, they must be reduced, mitigated, or appropriately compensated for (A. P. Iri, 2021, p.17) [9]. Under this leadership, noise is used by the mining company as a social resource that positions the village of Oualéguéra as a directly impacted village, even though the mine is not located on the village's land. The village of Oualéguéra, in turn, uses noise as a means of capturing and claiming the same privileges as the villages designated as directly impacted, whose land has been annexed by the mine, notably Lafigué, Fénéssiguédougou, Sokorogo, and Tolledougou. The village of Oualéguéré is therefore using noise as a means of demanding employment opportunities for their children within the mine.

2. Environmental impacts and weakening of community resilience in the village of Oualéguéra

2.1. Illegal gold mining: from soil infertility to weakened socio-economic resilience

The village communities, particularly those in the village of Oualéguéra, were organized within the local mining cooperative known as COPEDA. This cooperative was involved in artisanal gold mining. COPEDA thus functioned as a community resilience strategy in the face of the impacts of global warming on agricultural production. However, the establishment of the Lafigué mining company (SML) on village land in the department of Dabakala led to the breakdown of traditional gold mining and the cessation of its activities. Now, under the 2014 Ivorian mining code, gold mining is considered illegal. To practice it, one must hold a permit symbolizing authorization from the competent mining authority. However, it continues to be practiced clandestinely by local communities. Indeed, this type of activity is perceived differently by society. When practiced by the indigenous Djimini people, it is considered by them to be a legitimate traditional activity. This is because it is carried out on local land. When it is practiced by those socially designated as outsiders, it is perceived as a clandestine practice by the native Djimini of the village of Oualéguéra.

The words of a native farmer in the village of Oualéguéra are most illustrative

> It must be said that we have noticed that the Burkinabè are in the bush over there, I can't lie to you about that, they are there. I was told that there are Burkinabè in my field who are deep in the bush under a hill. They are digging up the hill to do illegal gold panning, so I wanted to go see the sub-prefect to tell him about it, but it's at night that they do these kinds of things. They also use explosives called faraway in their jargon. I don't know how they make these explosives, but they have them there, and they also have pickaxes, which they use to break rocks and dig pits. Because it makes noise, they remove the rocks at night and transport them in cars, and then they go and blow them up in another area. We ourselves don't understand anything anymore.

Furthermore, this transcript reveals the strategies used by illegal gold miners to exploit the gold deposit. It also highlights that these strategies have environmental consequences on the forest cover, as the illegal miners also use explosives after clearing the forest. This also has an impact on the soil. Gold miners dig holes without filling them in and use chemicals that render the land infertile for agricultural production. To conceal the noise of the explosives, they transport the rocks from the starting perimeter to another location. This further exacerbates soil destruction from one locality to another. In addition, it should be noted that global warming has given rise to community resilience strategies to counteract the decline in agricultural production. These strategies involve local communities forming informal economic interest groups (EIGs) with a view to maximizing efforts to produce in abundance and sell agricultural products (cashews, rice, corn, etc.) collectively. In the village of Oualéguéra, we counted four economic interest groups, namely: the *Wachéyè* (Let's move forward) mixed men's and women's group. This group sells cashews, rice, and corn collectively; the *Yéwossa* women's group (Help us), which specializes in

market gardening (okra, tomatoes, chili peppers, eggplant); the Wébai women's group (We are united), which produces peanuts, cassava, and white beans; and finally, the Wonanpéssarê women's group (We are here to help them), which also produces peanuts and cassava. These socio-community resilience strategies are further weakened by the environmental impacts of illegal gold mining, as the soil becomes increasingly barren and infertile. Women are no longer able to produce abundantly and sell their products. Land that was already infertile due to farmers' use of chemicals, particularly herbicides and insecticides, is becoming even more uncultivable as a result of gold mining. This is leading to a further decline in productivity and exacerbating the weak purchasing power of households. The following excerpts from a speech by the president of one of the community groups in the village of Oualéguera support this argument:

> Before, the rains came regularly, the seasons were predictable, and we produced a lot. Our husbands sold a lot, and we sold a lot too. Nowadays, to get rain, we have to throw cowrie shells, and sometimes it works, sometimes it doesn't. This has ruined our cashew and corn crops, and our production has fallen sharply. On top of that, the Burkinabe have arrived and are destroying our forests and soil in search of gold. Things have become twice as complicated. We formed an association to produce more and sell more, but if the soil itself is ruined, what can we do ?

2.2. Noise pollution and weakening of community resilience in terms of housing and sanitation in the village

Some villages in the department of Dabakala have embarked on a process of modernizing the social and environmental space in which they live. This process concerns sanitation, housing development, and school infrastructure. It involves moving from traditional housing made of straw and other traditional materials to housing that uses modern materials such as bricks, cement, etc., and the construction of certain religious, health, and school buildings. The village of Oualéguéra has not remained on the sidelines of this movement. With this in mind, it has set up a non-profit association. It is a mixed group called karfanga (the strength of the village). This group is made up of young people, women, and men from the village. It functions as a resilience strategy in the construction of modern housing, sanitation, and maintenance of village roads. It is based on the collection of financial resources from the bulk sale of agricultural products such as cashews, peanuts, and corn, as well as financial resources collected from the semi-industrial exploitation of the mineral deposit by the Chinese. These collected resources are then used to finance the construction of public infrastructure in the village. This is evidenced by the financing of the village's school infrastructure. This includes the construction of the village's first three-classroom building, the construction of the preschool building, and teachers' housing. This reflects the resilience of local communities in terms of infrastructure facilities outside of social assistance from administrative authorities, relevant decentralized services, and community development NGOs.

However, there is evidence of an impact on the stability of these school facilities due to noise pollution from regular mining operations carried out by the Lafigué mining company. The noise and vibrations cause permanent cracks in these structures. Over time, this could lead to the destruction of these buildings and jeopardize the socio-educational future of the children of this village. This situation undermines community resilience in terms of housing and sanitation in the village. It also undermines community efforts to build these infrastructures.

This is evidenced by the images taken in the village of Oualéguéra.

Source: authors' surveys, 2025

Photos of primary school buildings in the village of Oualéguéra. They show the impact of noise on the stability of school infrastructure in the village of Oualéguéra. This demonstrates the weakening of community resilience in terms of housing and sanitation in the village.

Discussion of Results

The results of this study can be divided into two specific areas. On the one hand, they highlight the power relations involved in mining and, on the other, they highlight the environmental impacts of mining on the socio-economic resilience of local communities. The discussion will be structured according to these categories of analysis.

1. Mining activities and power relations

This study indicates the manifestation of power relations in the exploitation of the mineral deposit in the village of Oualéguéra. It shows that the noise pollution suffered by the village, particularly through noise and vibration, is used by the village communities as a source of power to demand decent employment for their children within the Lafigué mining company. Furthermore, noise activation acts as a regulator of social interactions between village communities and the mining company. This finding is consistent with that of B. Campbell and B. Sarrasin (2012, pp. 1 and 2) [4] on joint regulation modes that increasingly rely on private agreements negotiated between mining companies and communities to address the (positive and negative) effects of projects at the local level. From this perspective, their analysis proposes to consider the mining industry as one of the fundamental structures that helps to generate a space for social transaction in which a complex and varied range of actors operate, exercising various forms of structural power that condition the specific forms of regulation adopted (B. Campbell, B. Sarrasin, op. cit., p. 5). In this space, they note, power games are determined, among other things, by the structure resulting from the legal regimes in place. This finding also supports that of M. Denoël (2019) [7] on the power relations between the mining administration and local communities. To this end, the author notes that in mining, power is defined as exogenous and endogenous, asymmetrical, and inherent in other social relationships. It is therefore more of a set of relationships, formed by articulated micro-powers that contribute to changing a given situation, in this case, the territories targeted by commodity capture (p32-33). To account for this, his work is based on the neo-extractivism model, which he defines as a model that responds to capitalism's need to expand into new territories and new resources. With this in mind, he highlights the case of large-scale metal mining, particularly in the provinces of San Juan, Jujuy, and Mendoza in Argentina. His findings describe the establishment of a dialectical movement between the local and the global insofar as, he points out, “not always dominant,” the “local” is both constraining (obstacle) and welcoming (articulations, interactions). In the sense that mineral resources are always located and built on a set of material and immaterial elements the ore, the mountain, representations the “local” constrains the “global.” (P. 330). Furthermore, this finding is complemented by the study by Ș. S. Yaman (2023) [18]. The author focuses particularly on the dynamics of structural power in space mining between state structures and mining companies. In this context, her analysis of structural power refers to the ability to influence not only directly, but also through indirect and diffuse means (p.24). According to her text, private company executives and managers wield structural influence that can confer political advantages, even in the absence of active political engagement. In this regard, she notes that space mining is not simply a matter of technical or commercial operations. It is a complex field of interaction where structural power, influenced by mechanisms such as lobbying, partnerships, and financial dynamics, plays a decisive role. These forces, she argues, operating sometimes behind the scenes and sometimes at the forefront, dictate the direction and nature of policies, legal regulations, and economic dynamics (p. 25).

2. Mining activities, environmental changes, and impacts on socioeconomic resilience

The study reveals that the environmental impacts of mining weaken pockets of community resilience. In the village of Oualéguéra, it shows that women who have formed economic interest groups to sell cashews, rice, and corn to counter the effects of global warming on declining agricultural production, are unable to produce in abundance and sell their goods due to soil infertility caused by the impacts of mining. In this regard, this finding corroborates the report by MONDIAL POUR LES FORÊTS TROPICALES (2004, p. 31) concerning the weakening of the economic resilience of Dayak women in Indonesia in the areas of agriculture, fish sales, and financial compensation in the context of the environmental impacts of mining. The report mentions that Dayak women owned several hectares of traditional land, which allowed them to produce rice in abundance, sufficient for both family subsistence and commercial needs. However, with the introduction of mining into the community, they are seeing this resilience weakened. They are moving from productive resilience to purchasing resilience. This is because they are losing large areas of this land and are now forced to buy more expensive rice to feed their families. In addition, the report notes that the mining company's operations have polluted the river, which is no longer suitable for domestic use and no longer produces fish. As a result, this pollution has led to a shift from fresh fish production to the expensive purchase of salted fish. To obtain water for bathing and consumption, the report says, these women must walk long distances to a source that is not contaminated by the company's waste. Her livelihood was further affected by the loss of her two water buffaloes, which she found dead on the banks of the contaminated river. Finally, the report notes that women's resilience is weakened in terms of financial compensation because they are deprived of their traditional livelihoods and become more dependent on men, who have greater opportunities to access and control these benefits.

This finding is also confirmed by the JPIC COMMISSION report (2014, p. 13) [5], which analyzes the social cost of the environmental impacts of mining in the context of space and the Philippines. With regard to the latter country, the report shows the economic fragility of a Philippine village following its displacement due to nickel mining. Whereas previously, the local population had built its resilience strategy on terrace rice production and lemon cultivation in lush valleys, they are now grouped together in uniform wooden houses outside the mining complex where most of them work. Their vulnerability is exacerbated by the fact that some remain small-scale artisanal miners, collecting debris from accessible areas on the outskirts of the mine. The report complements our findings on the industrial contamination of the local water supply in Rio Tinto, Spain. Indeed, it supports the argument that there is inequality in the distribution of the social cost of resources. To this end, the report notes that the poor are particularly vulnerable to the release of toxins into the air and water, the deterioration of infrastructure, and limited access to opportunities offered by the local economy. For example, industrial pollution of surface water has a greater impact on people who do not have access to effective drinking water treatment facilities or who cannot afford to buy water. JPIC Commission (op. cit., p. 12). In this regard, our findings corroborate those of

E. Voundi *et al*. (2019, p. 1) [17]. They analyze the socio-environmental changes caused by mining in Bétaré-Oya, in eastern Cameront. For the authors, the environmental changes caused by mining activities call into question the long-term development prospects of local communities and raise many problems.

Conclusion

This study focuses primarily on the environmental consequences of regular and irregular mining operations in the department of Dabakala and their implications for the socioeconomic resilience of the communities affected. It showed first that the village of Oualéguéra is impacted by noise pollution caused by the regular mining operations of Lafigué Mining Company, a subsidiary of Endeavour Mining, and second, that the village is suffering from the destruction of its forest cover and soil infertility due to illegal gold mining. Noise pollution, in the form of noise and vibration, has a direct impact on the stability of homes and school infrastructure, causing cracks and even the destruction of some homes that lack reinforcement. This type of impact therefore weakens the community resilience of the village in terms of housing construction, school infrastructure, and road maintenance. It undermines the efforts of village communities to develop and urbanize their territory. Soil infertility linked to illegal gold mining limits the economic resilience of households affected by declining agricultural production due to global warming. Women are the most affected social group because not only are they reduced to farming small plots of land, but these plots are also becoming increasingly uncultivable due to illegal gold mining. Agricultural production and the sale of products are weakened. This leads to a decline in purchasing power and family livelihood resources. This further accentuates their socio-economic vulnerability. In light of these findings, the study recommends that illegal gold mining be taken into account in the formal regulation of mining activities through a decree that lays the foundations for the adequate training and supervision of these actors in order to support the economic resilience of the communities affected. In return, the State could set up a system of taxation of the activity in a win-win partnership because, rather than perceiving this sector as a reflection of the poverty of communities, it is a real source of wealth.

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